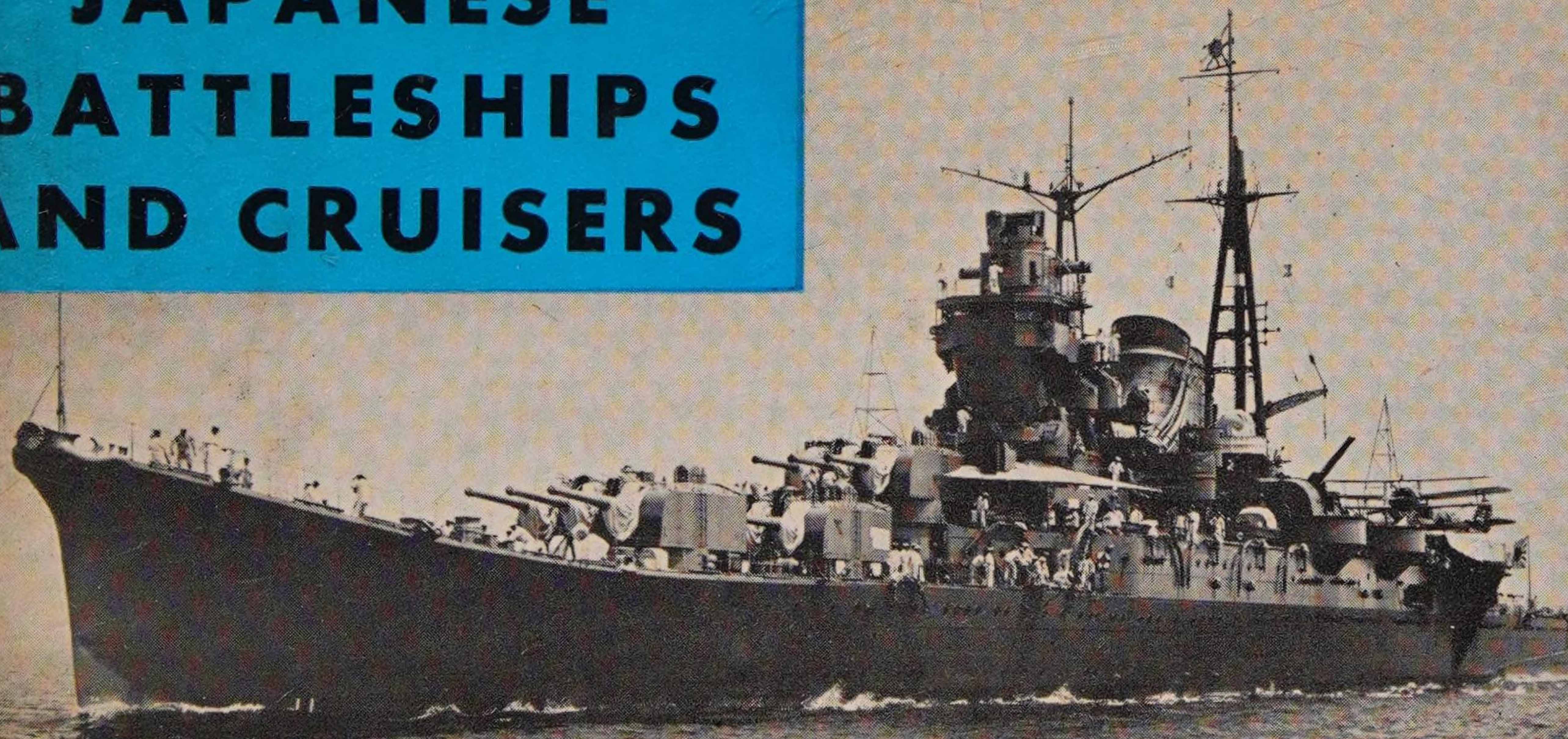


POCKET PICTORIAL Vol.1

JAPANESE BATTLESHIPS AND CRUISERS



**POCKET
PICTORIAL Volume 1**

**Japanese
Battleships
and Cruisers**

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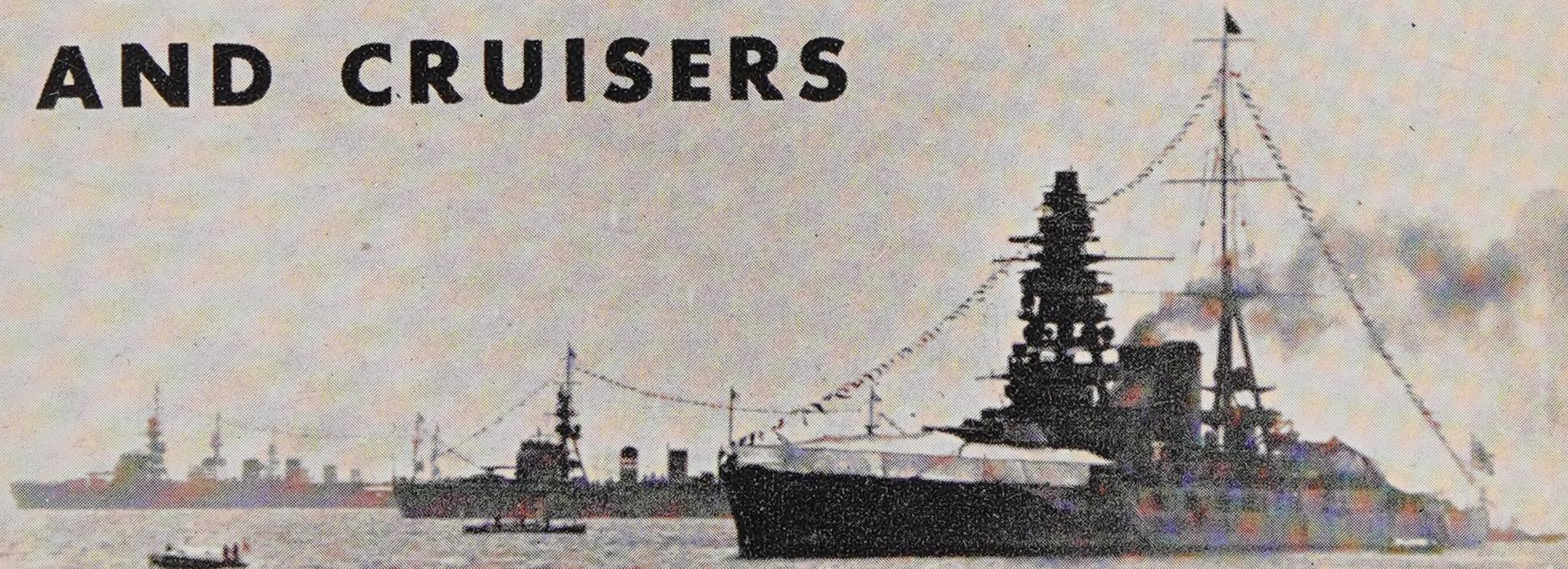
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JAPANESE BATTLESHIPS AND CRUISERS



POCKET PICTORIAL 1
MACDONALD; LONDON

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FOREWORD

Incredibly rapid expansion had made Japan a major maritime power, but the destruction which followed her defeat had been equally swift and complete. With the end of the war Japan was thrown into confusion. A navy which had once been the pride of the nation was forgotten as were all other things military. But, by the end of a decade the new Japan was a stable reality. It was in this context that people began to ask questions about the war and the Services. Particular public interest was directed at the navy, its war strategies and resources.

This interest was natural enough since the war was essentially a series of naval battles and operations. An analysis by experts in terms of the naval strategies and tactics involved would provide one sort of answer, but so long as there was no account which made available informed and detailed particulars of the individual ships concerned, it would have been difficult to reach any balanced assessment on the actions of the Imperial Japanese Navy.

It was with this thought in mind that our book was compiled. With the kind co-operation of Macdonald & Co. (Publishers) Ltd., London, this book has been made available to readers all over the world. While this book deals with battleships and cruisers, a second sister volume is devoted to aircraft carriers and destroyers. In essence pictorial, the two books contain full particulars of individual ships as well as their history in action up to the end of the Pacific War.

It is our hope that readers will find in these books and in subsequent books in the series about the other Services a valuable guide to the understanding of Japan's war.

The Publishers.

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BATTLESHIPS

KONGO Class

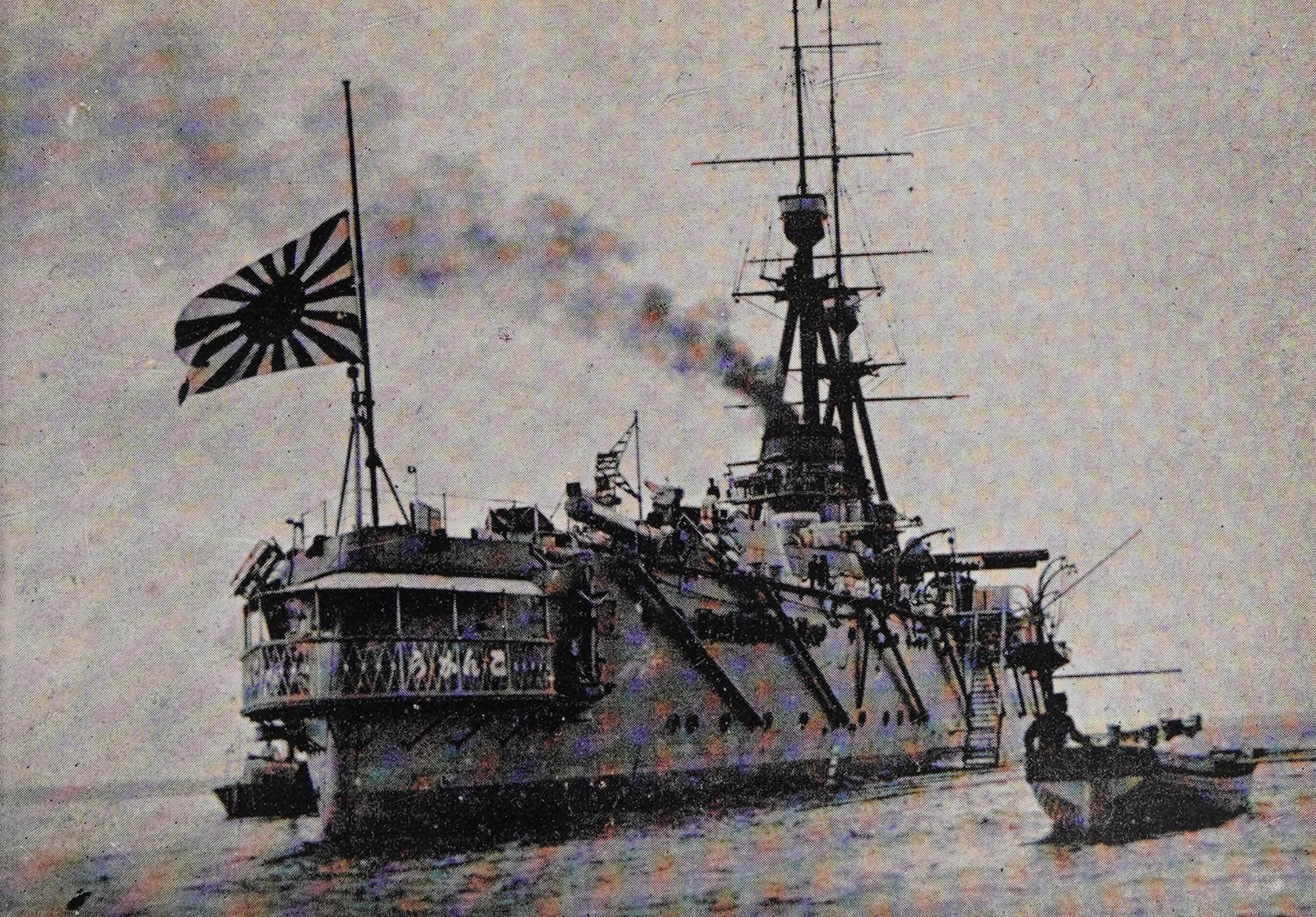
	Completed	Converted	Fate
KONGO	16-8-13 Vickers	1) 31- 3-31 2) 8- 1-37	Lost 21-11-44, Battle for Leyte Gulf, U.S. submarine
HIEI	4-8-14 Yokosuka	1) 31-12-32 2) 31- 1-40	Lost 13-11-42 Battle of Guadalcanal, U.S. planes
HARUNA	19-4-15 Kawasaki	1) 31- 7-28 2) 30- 9-34	Scrapped after war
KIRISHIMA	19-4-15 Nagasaki	1) 31- 3-30 2) 8- 6-36	Lost 15-11-42, Battle of Guadalcanal, U.S. vessels

Project: 1910 Expansion Programme and 1911 Emergency Expansion Programme

History: The world's mightiest battle-cruiser at completion, the *KONGO* was built in England followed by her sister ships built in Japan through induction of the British technology. Through extensive conversion and modernisation conducted from late 1920s these battle-cruisers were given stronger protection to become battleships, their speed being reduced from 27.5 kt. to 26 kt. Named after famous mountains in Japan for their original category of the battle-cruiser, they emerged from the second conversion programme of late 1930s as unique modern high-speed battleships with the maximum speed of 30 kt. The *HIEI* was converted into the training battleship in 1932 as the result of the London Naval Treaty, but joined her sister ships later to be re-built into the high-speed battleship as soon as the non-treaty days arrived. Being the last to be converted, the *HIEI* became the test bed of various new designs and systems including the bridge structure conceived for the super battleship *YAMATO*.

The battle-cruiser *KONGO* off Shinagawa, April 1922, the flag at half-mast for the state funeral of Field Marshal A. Yamagata.

BB KONGO.

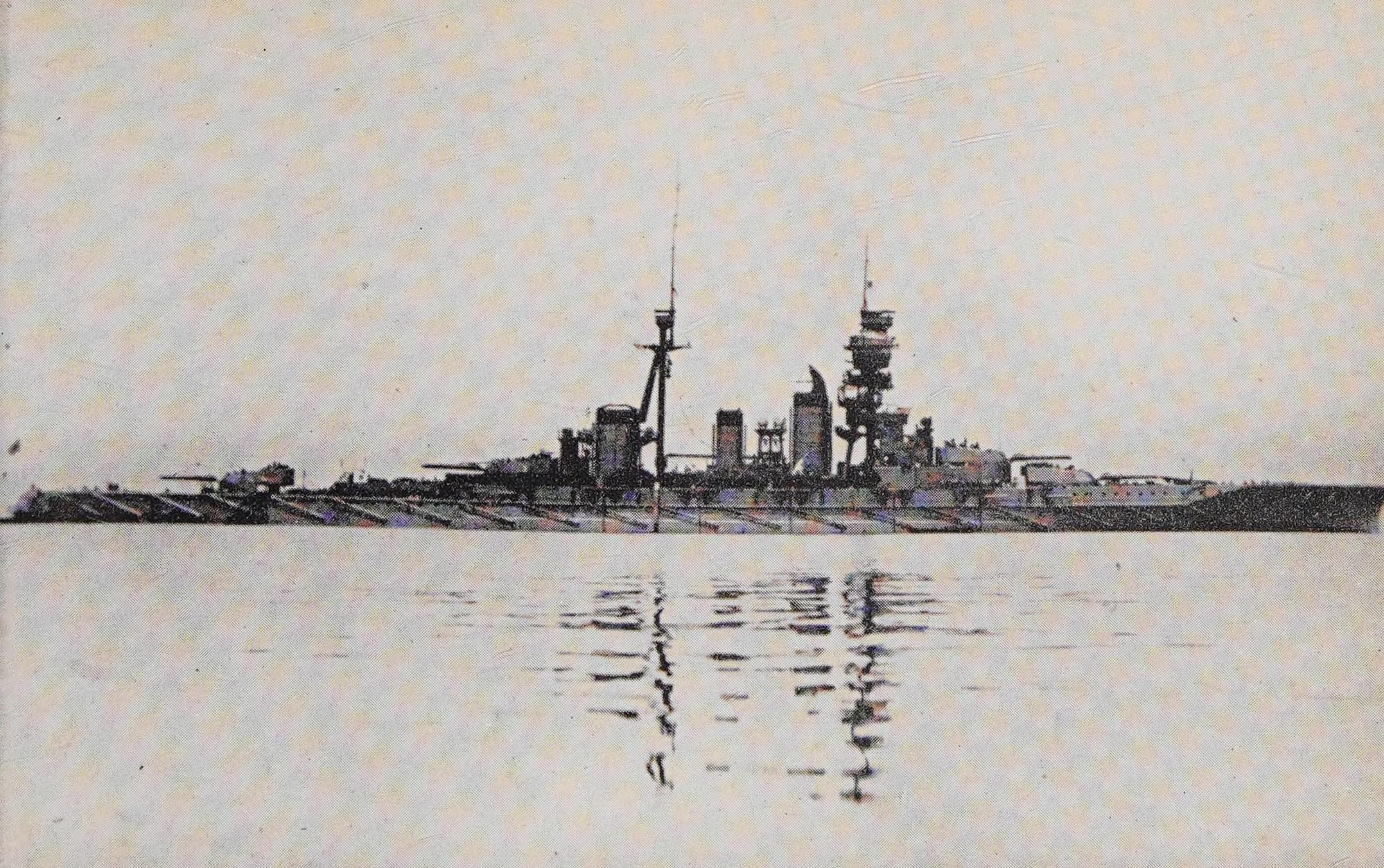


The four high-speed battleships of the *Kongo* Class comprised the Third Battleship Division and operated with the carrier task forces in the Pacific War. The *Hiei* became the first battleship Japan lost in the war when it was scuttled after receiving heavy damage from U.S. torpedo-bombers off Savo Island.

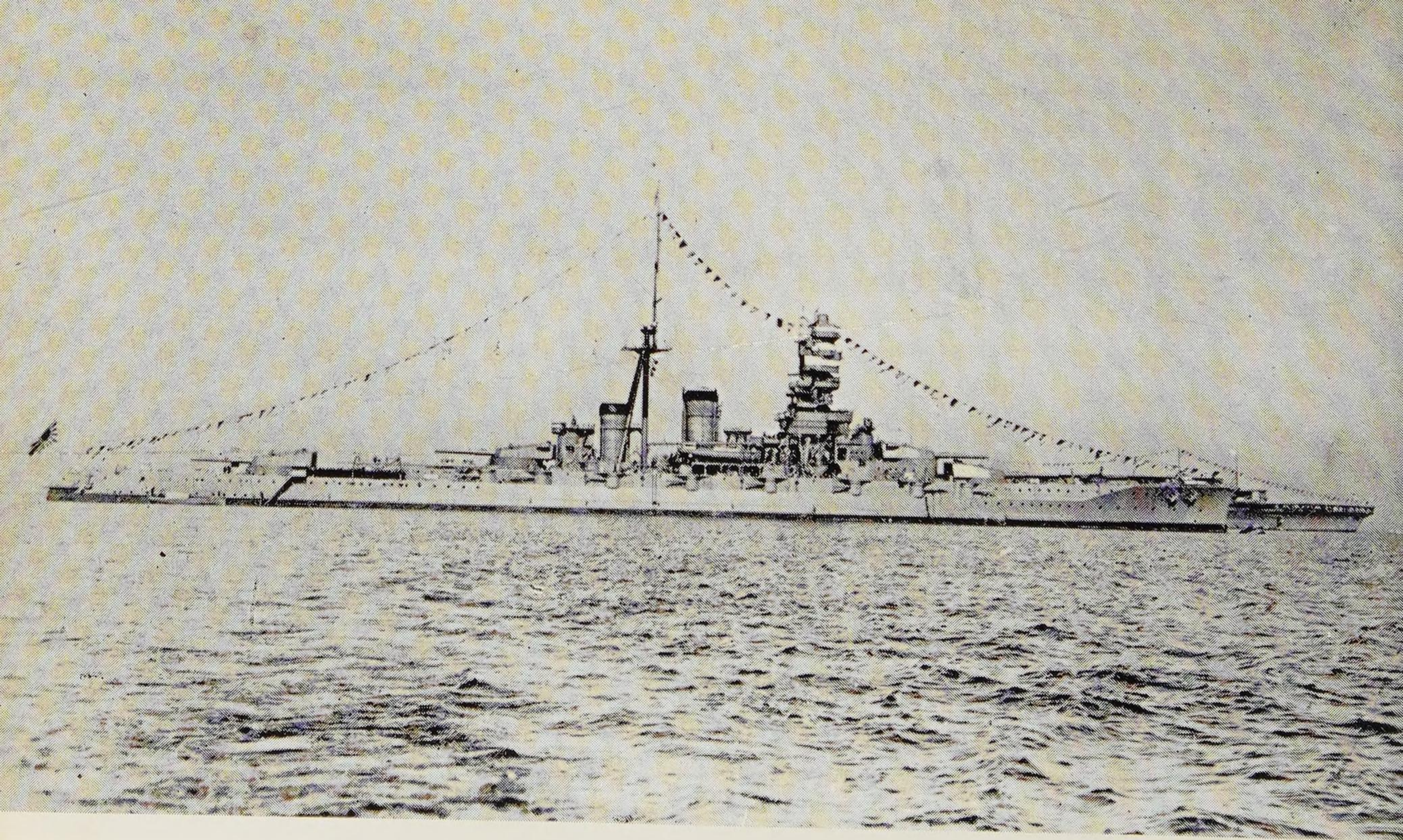
Comparative ships: <i>Repulse</i> (Br.), <i>Scharnhorst</i> (Gr.), <i>Dunkerque</i> (Fr.)	
Displacement:	26,330 T. (WS), 27,963 t. (WN)
Dimensions:	<i>Length:</i> 704.03 ft.-214.58 m (o.a.), 695.00 ft.-211.84 m. (w.l.)
	<i>Beam:</i> 92.00 ft.-28.04 m. (w.l.) <i>Draught:</i> 27.50 ft.-8.38 m. (mean)
Armament:	<i>Guns:</i> 8-14 in. 16-5.9 in., <i>Torpedo Tubes:</i> 8-21 in. (under waterline)
Machinery:	Pearsons Turbines S.H.P.: 64,000 <i>Speed:</i> 27.5 kts.
Complement:	1,221
Displacement:	31,720 T. (WS), 36,314 t. (WT)
Dimensions:	<i>Length:</i> 738.55 ft.-222.05 m (o.a.), 720.54 ft.-218.61 m. (w.l.)
	<i>Beam:</i> 95.28 ft.-29.04 m. (w.l.) <i>Draught:</i> 31.98 ft.-9.72 m. (mean)
Armament:	<i>Guns:</i> 8-14 in., 14-5.9 in., 9-5 in. AA. 20-25 mm. AA.
	<i>Planes:</i> 3 <i>Catapults:</i> 1
Machinery:	Kanpon Turbines S.H.P.: 136,000 <i>Speed:</i> 30.27 kts.
Complement:	1,437
Data:	1) At completion (HARUNA), 2) At second conversion (KONGO)

KONGO (2)

The battle-cruiser *KONGO* in mid-1925s. Addition of the direction control post in the foremast, extension of the No.1 funnel with the new smokehood, addition of the searchlight tower between the Nos. 2 and 3 funnels, etc. considerably changed the silhouette of the ship since the time of completion. Armament of the ship comprised eight 45-cal. 36-cm. (14-in.) main guns, sixteen 15-cm. (5.9-in.) guns and eight 8-cm. (3.2-in.) guns.



BCR KONGO.



KONGO (3)

← The battleship *KONGO* dressed for the 1933 Naval Review.

KONGO (4)

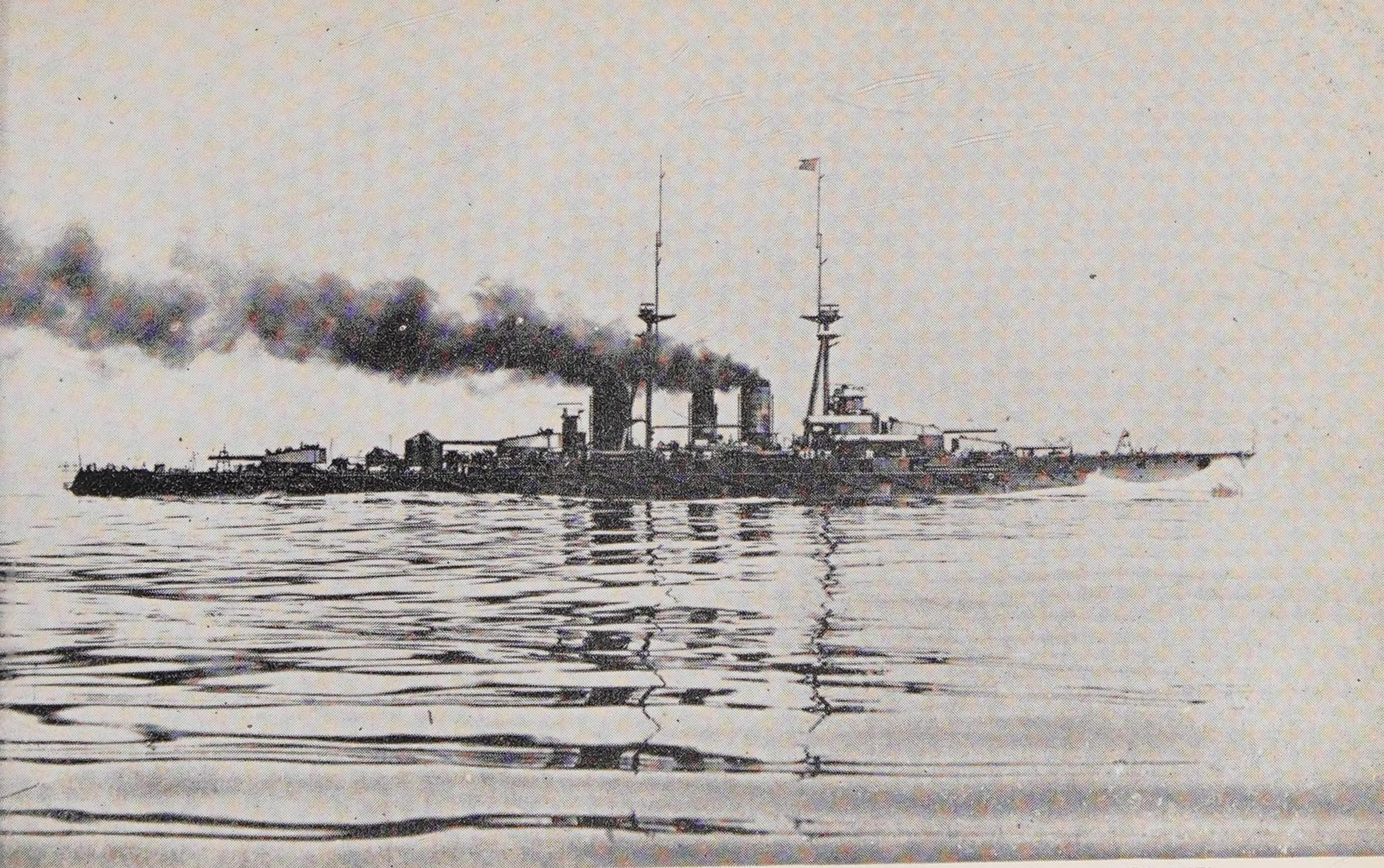
The battleship *KONGO* after the second conversion, as seen from a British warship at Amoy on 19th December 1938. Noteworthy is the 10-m. range finder atop the pagoda mast. The stern was extended by 24 ft. for her high speed. On the catapult is a Type 95 single-float biplane.



BB KONGO.

HIEI (1)

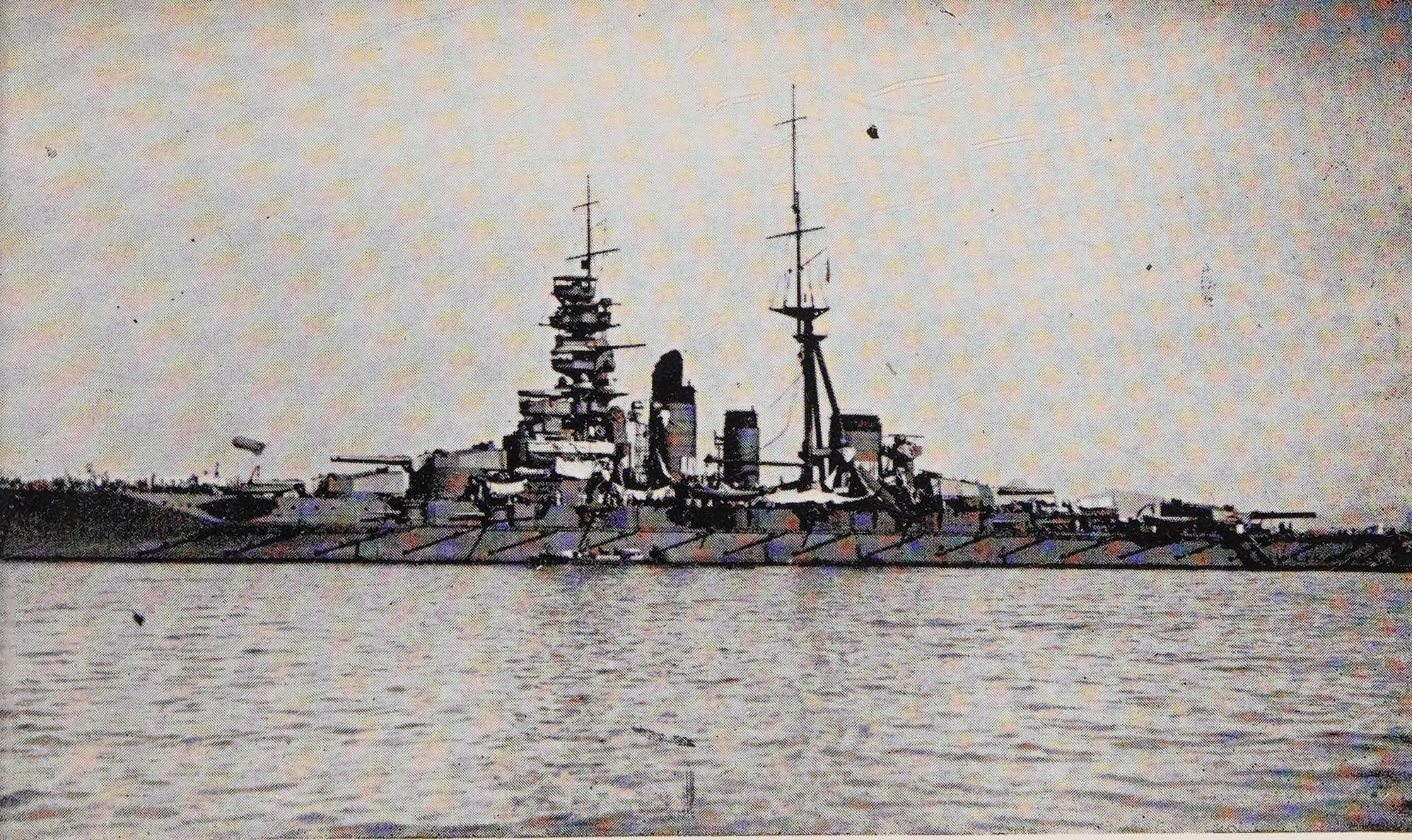
The battle-cruiser *HIEI* shortly after completion. Construction of the *HIEI* began ten months after the work was initiated on her sister ship *KONGO* in Britain. The *HIEI* used both coal-fired and oil-fired boilers, carrying 1,000 tons of oil and 4,000 tons of coal.



BCR HIEI.

HIEI (2)

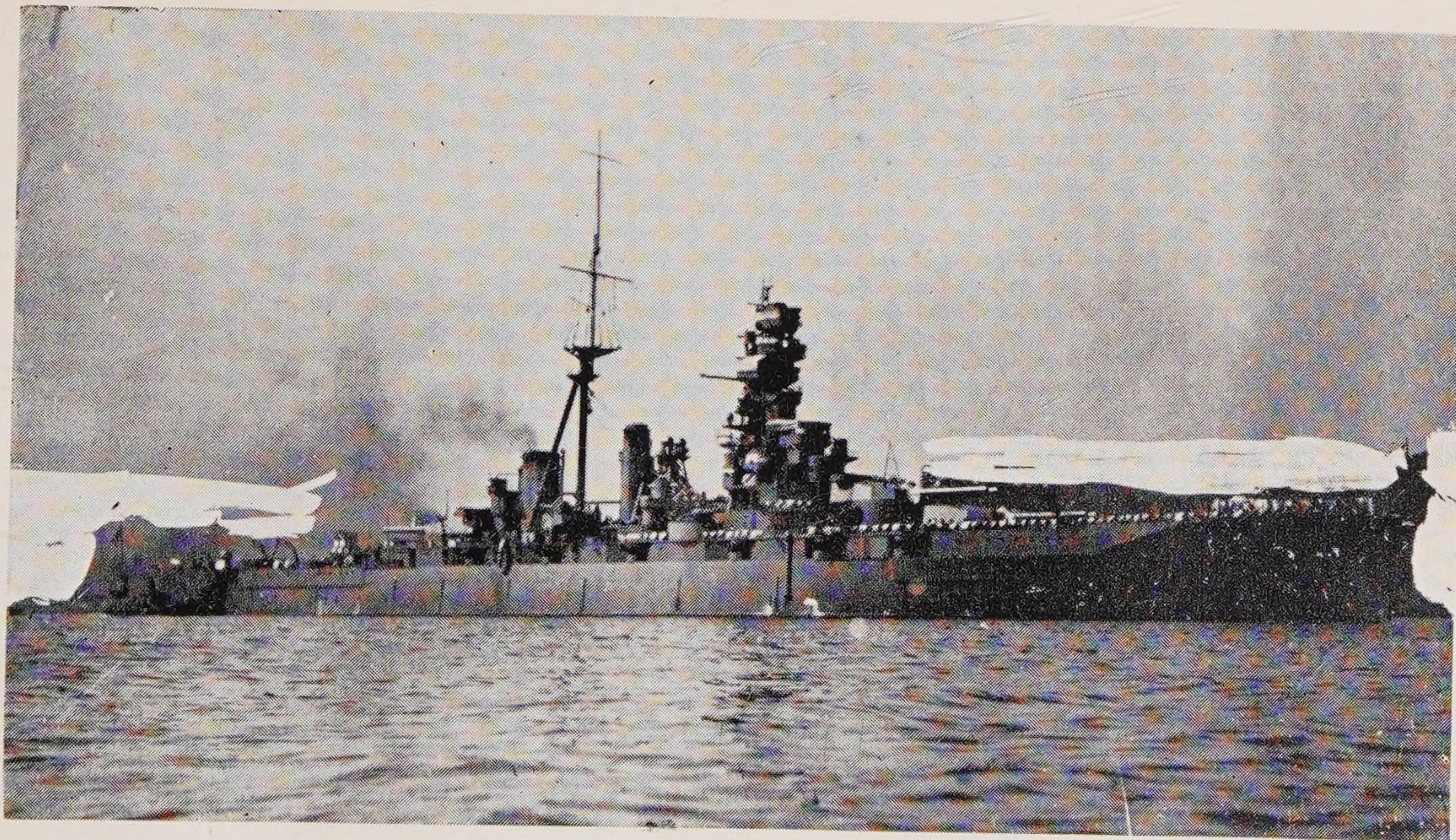
The battle-cruiser *HIEI* in 1929. Addition of the fire control system and the direction finder, etc. in the foremast changed her appearance since completion. Distance between the Nos. 1 and 2 funnels is shorter in the *HIEI* and two others built in Japan than the *KONGO* which was built in England. Knuckles on the sides of the main turrets are peculiar to only the *HIEI* and *KONGO*.



BCR HIEI.

HIEI (3)

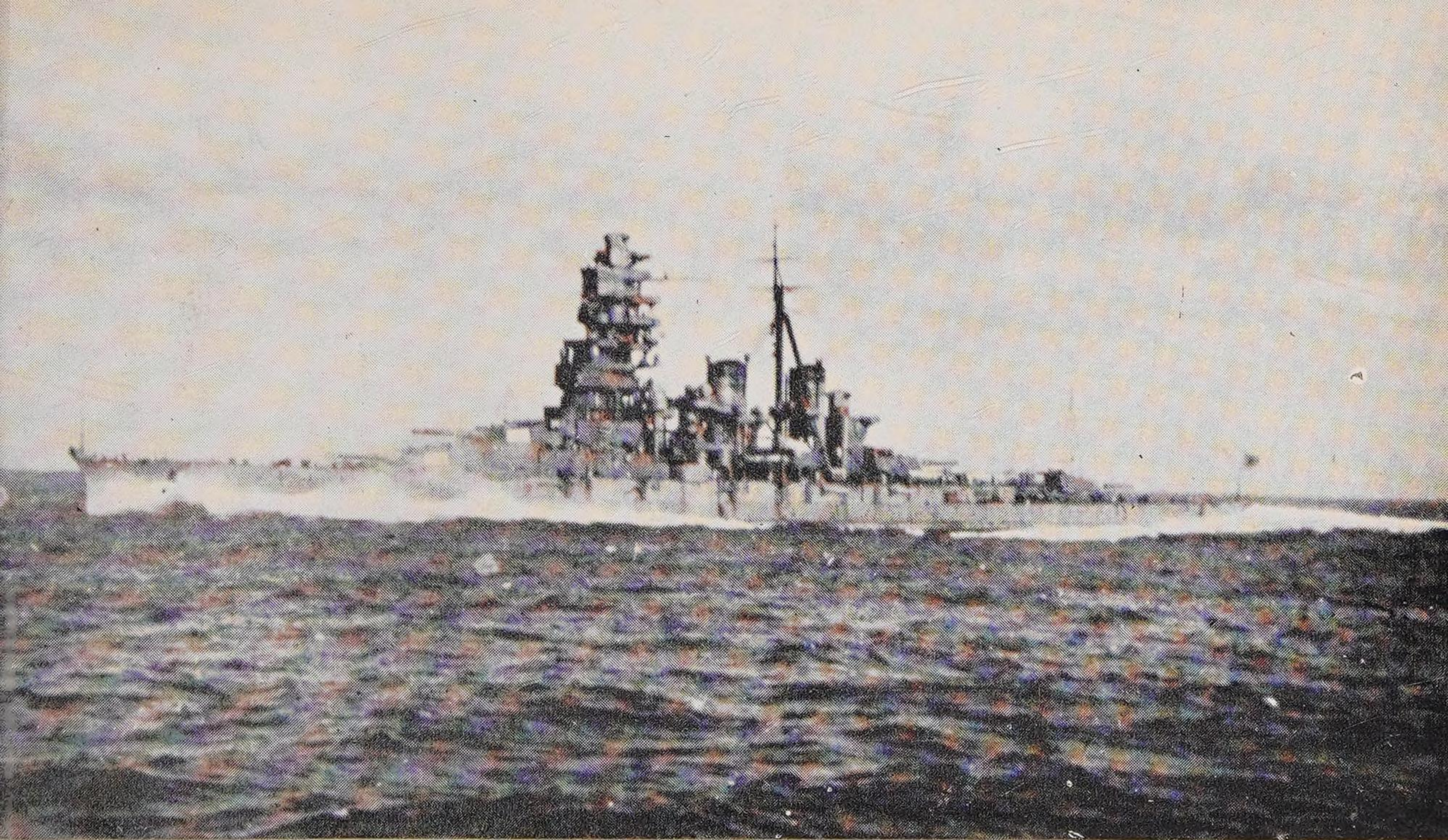
The *HIEI* as the training battleship, 1933. The military authorities obliterated the background with white of the pictures of warships taken for commercial sales such as this to keep the places where the pictures were taken under secret. Under the restrictions of the London Naval Treaty, the No.4 main gun turret and all of the secondary guns were dismantled; the number of boilers was diminished and the side armour plates were removed in the course of conversion ended on 31st December 1932. The fore funnel became thinner.



Training BB HIEI,

HIEI (4)

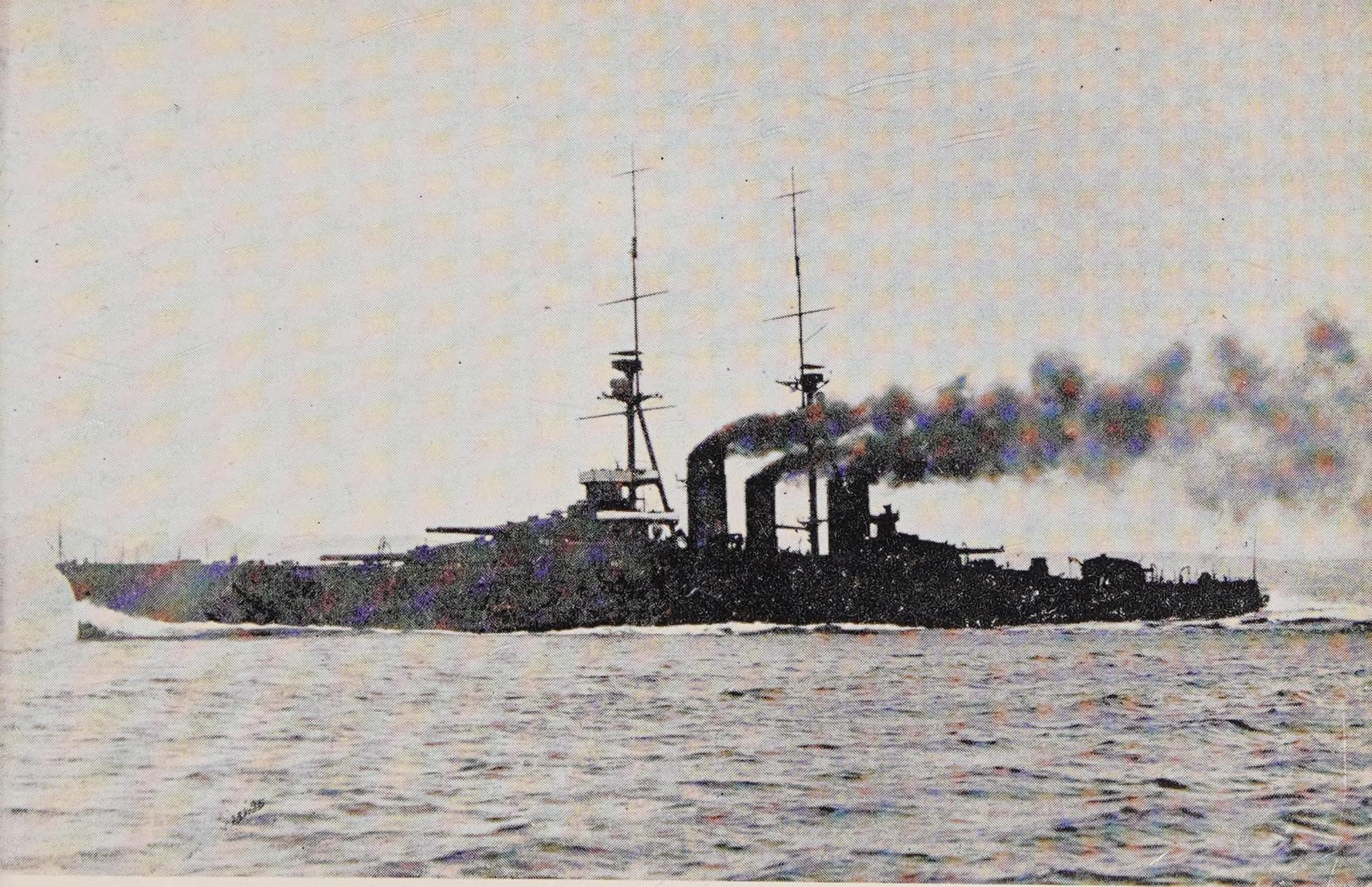
The high-speed battleship *HIEI* at full speed official trial run on 5th December 1939, off Sukumo Bay, Shikoku Island. Conversion of the *HIEI* from the training battleship was started in November 1936, incorporating various new designs and technology. Her pagoda mast structure especially served as the prototype for that of the *YAMATO*. The complicated pagoda mast structure from top to bottom includes the main gun fire control post, the 10-m. (32.8-ft.) dual range finder, the anti-aircraft combat centre, the combat bridge, the searchlight control post, the compass bridge, the 4.5-m. (14.8-ft.) range finder and the control cabin (immediately aft and above the No.2 main turret).



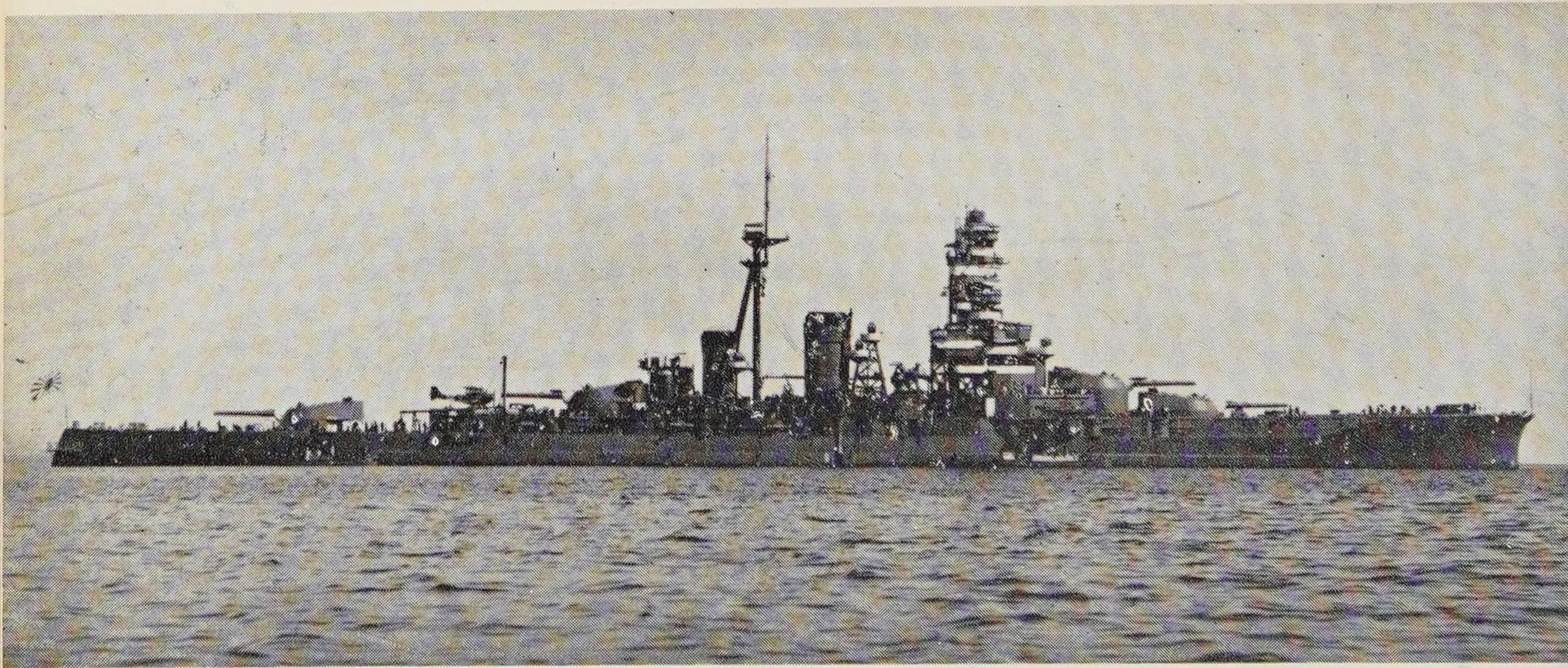
BB Hiei.

HARUNA (1)

The battle-cruiser *HARUNA* shortly after completion in 1915. The third ship of the *Kongo* Class, the *HARUNA* was completed on 19th April 1915 after a total 37 months work and at a cost of ¥24.5 million. Initially the *HARUNA* was equipped with eight 53-cm. (21-in.) underwater torpedo tubes. The simple tripod foremast was soon to be modified to accomodate the fire control post and others to become the so-called pagoda mast.



BCR HARUNA.



BB HARUNA

HARUNA (2)

The battleship *HARUNA* in 1930, after the first conversion. The *HARUNA* in these days had the No.1 funnel which was a little thicker than that of the *KIRISHIMA*. Between the Nos. 3 and 4 turrets can be seen a Type 90 Model 3 floatplane and the derrick.



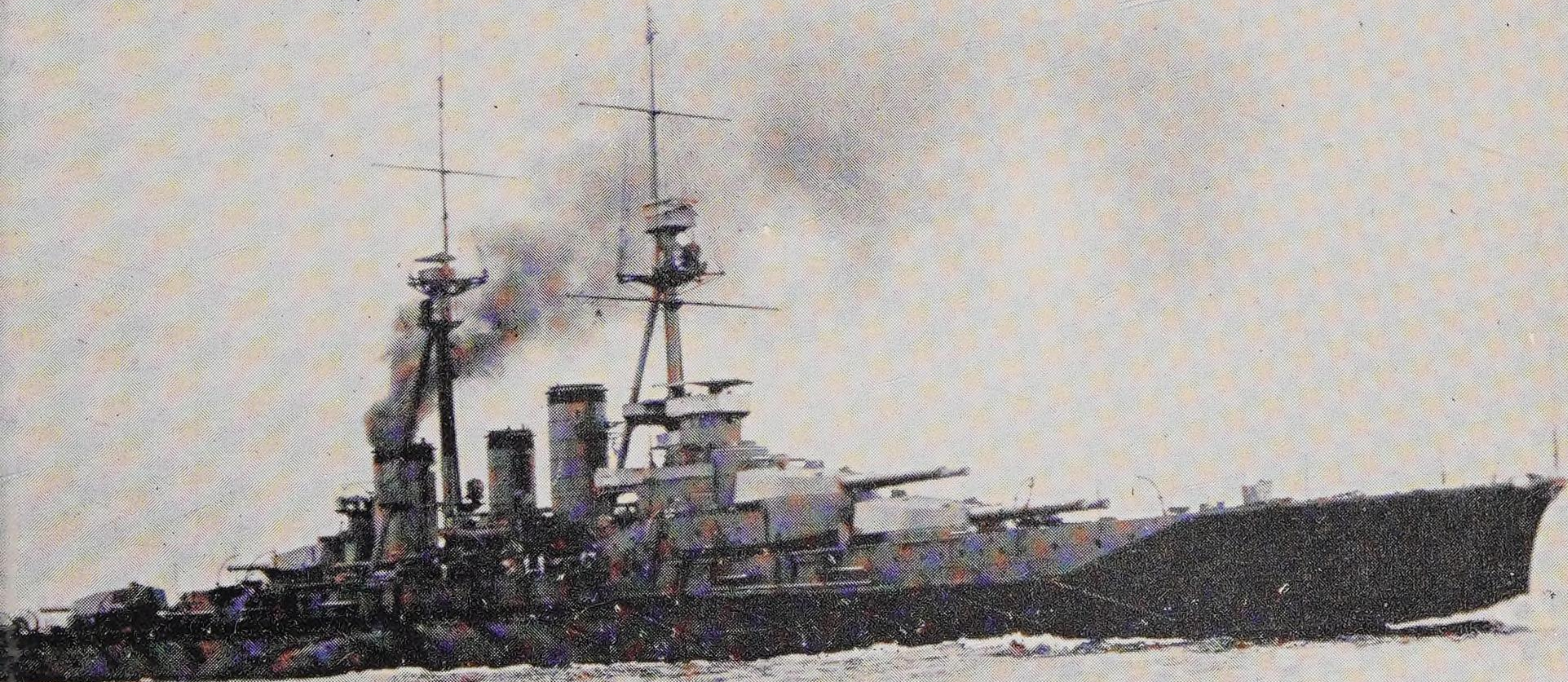
BB HARUNA.

HARUNA (3)

The *HARUNA* as the high-speed battleship at Tokyo Bay in October 1935. She attained a maximum speed of 30.2 kt. at the official full speed trial run. Through the second conversion, the main gun fire control system, the anti-gas and anti-aircraft systems, the living quarters, the damage control system, etc. were all modernised. Emergency water charging and discharging system was effected also immediately before the outbreak of the Pacific War. The height of the No.2 funnel was later made equal to the No.1 funnel.

KIRISHIMA (1)

The battle-cruiser *KIRISHIMA* on her way from Nagasaki to Sasebo in April 1915, following completion at the Nagasaki shipyard of the Mitsubishi Shipbuilding Co. on 19th April. Armour plating of the *KIRISHIMA* was 7 inches on sides and 10 inches on the control tower, respectively thinner by two inches than that of the battleship *FUSO*.



BCR KIRISHIMA.

KIRISHIMA (2)

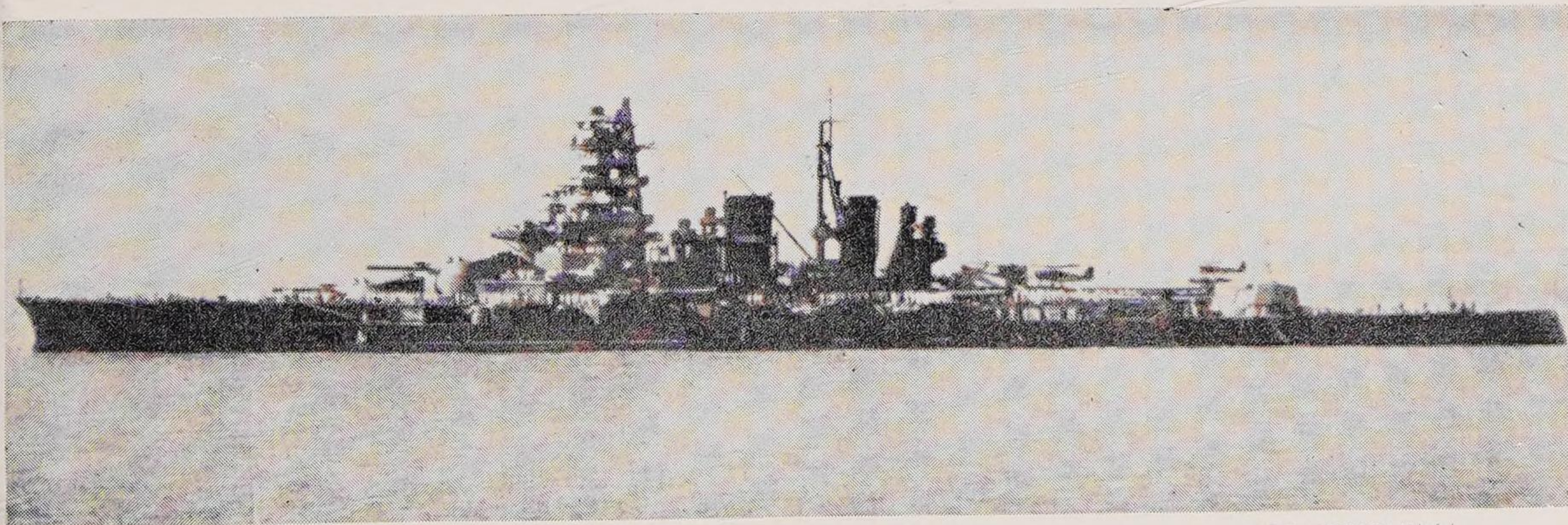
The battleship *KIRISHIMA* after the first conversion. She is seen at Yokosuka in 1932 as the second ship of the First Battleship Division. The ship is equipped with the derrick but no catapult yet.

BB KIRISHIMA.



KIRISHIMA (3)

The battleship *KIRISHIMA* at Amoy on 21st October 1938 as seen from a British warship. Note the big platform on the control tower which is for 25-mm. (1-in.) anti-aircraft machine guns. The ship has one catapult and three floatplanes (shown are a Type 94, left, and a Type 95 biplane). No major conversion was effected on the *KIRISHIMA* prior to the Pacific War.



BB KIRISHIMA.

FUSO Class

Name	Completed	Converted	Fate
FUSO	8-11-15 Kure	1) 12-5-33 2) 19-2-35	Lost 25-10-44, Battle for Leyte Gulf, U.S. vessels
YAMASHIRO	31-3-17 Yokosuka	30-3-35	Lost 25-10-44, Battle for Leyte Gulf, U.S. vessels

Project: 1911-12 Emergency Expansion Programme

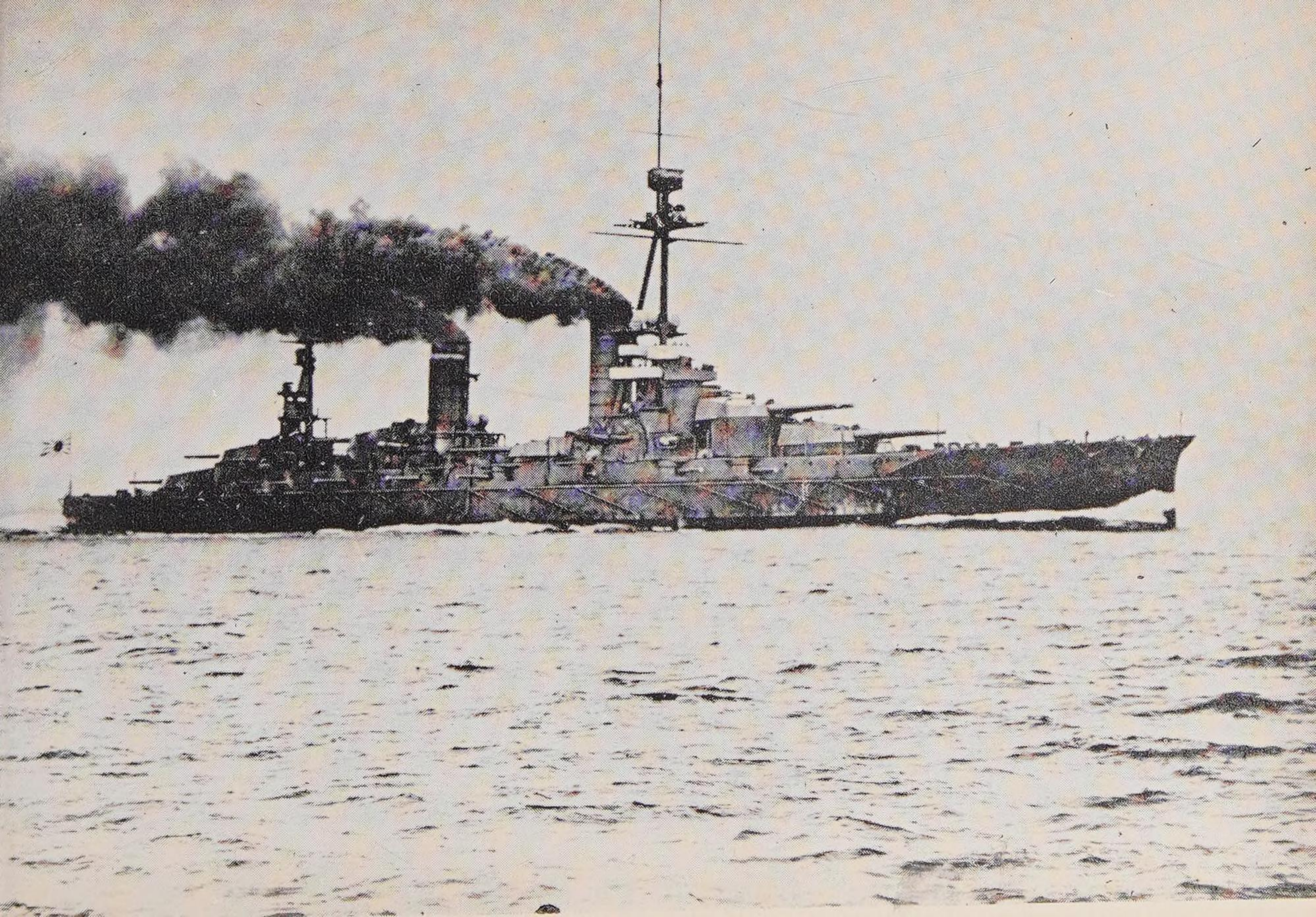
History: Japan's first super-dreadnought battleships, the *Fuso* Class ships were built to form the main force which would operate in concert with the four battle-cruisers of the *Kongo* Class. Named after the provinces of the Old Japan for the category of the battleship, the *FUSO* and *YAMASHIRO* underwent extensive conversion from 1933 through 1935 in the first phase of the battleship modernisation programme. The *FUSO*, being the first ship to be converted, lacked refinement in the silhouette and was generally regarded the ugliest battleship of the Imperial Japanese Navy. The *YAMASHIRO* had a far better appearance.

Old and slow, the two battleships were assigned the second-line duties during the Pacific War. When the Imperial Japanese Navy threw in everything it had in the Battle for Leyte Gulf, the *FUSO* and *YAMASHIRO* formed the Second Battleship Division and made their way into the strait of Surigao only to find their graves there after putting up a valiant fight.

Comparable ships: *Royal Sovereign* (Br.), *Nevada* (U.S.), *Pennsylvania* (U.S.), *Bretagne* (Fr.), *Queen Elizabeth* (Br.)

The battleship *FUSO* at official trial run of 29th August 1915, making 23 kt. with a displacement of 30,662 tons.

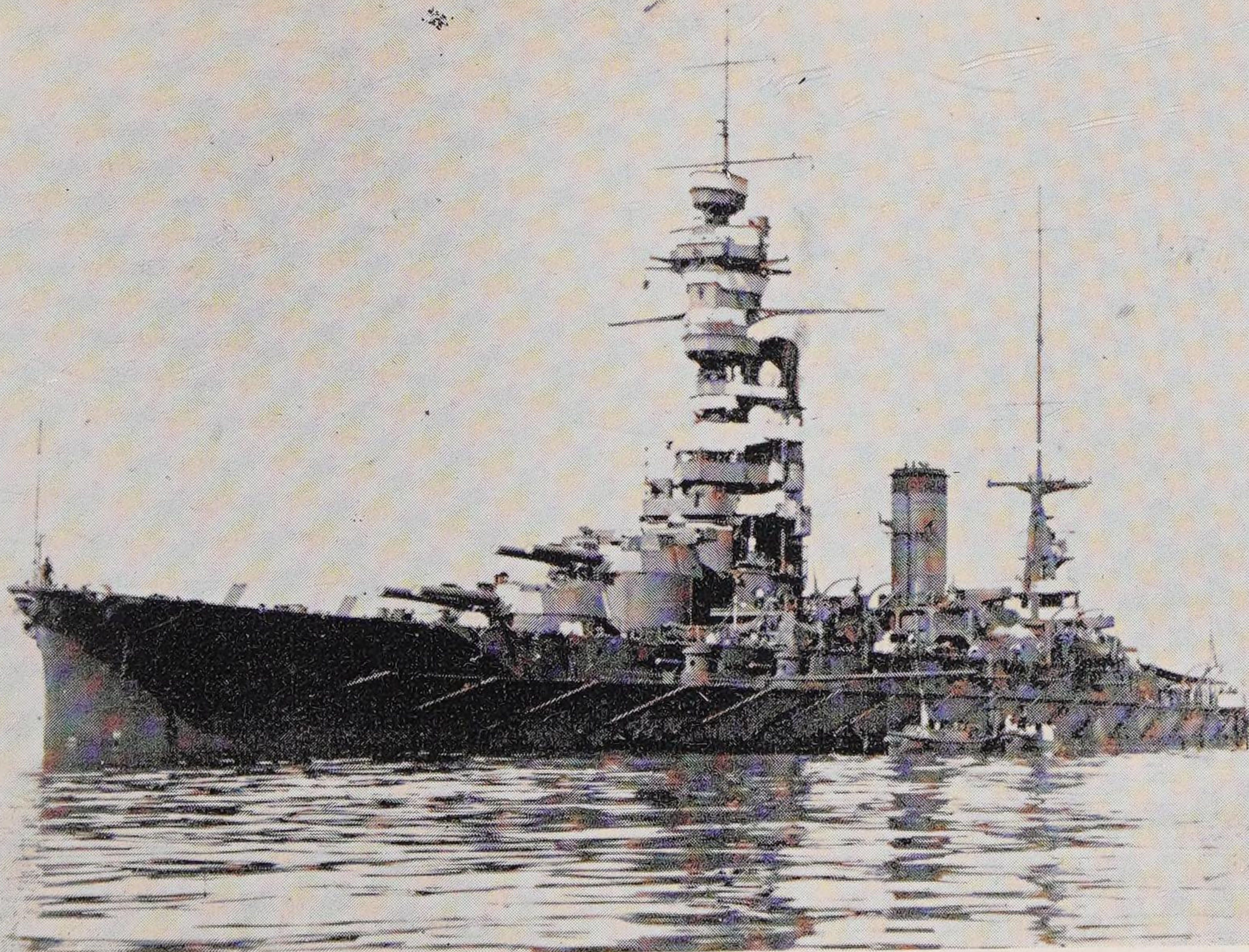
BB FUSO.



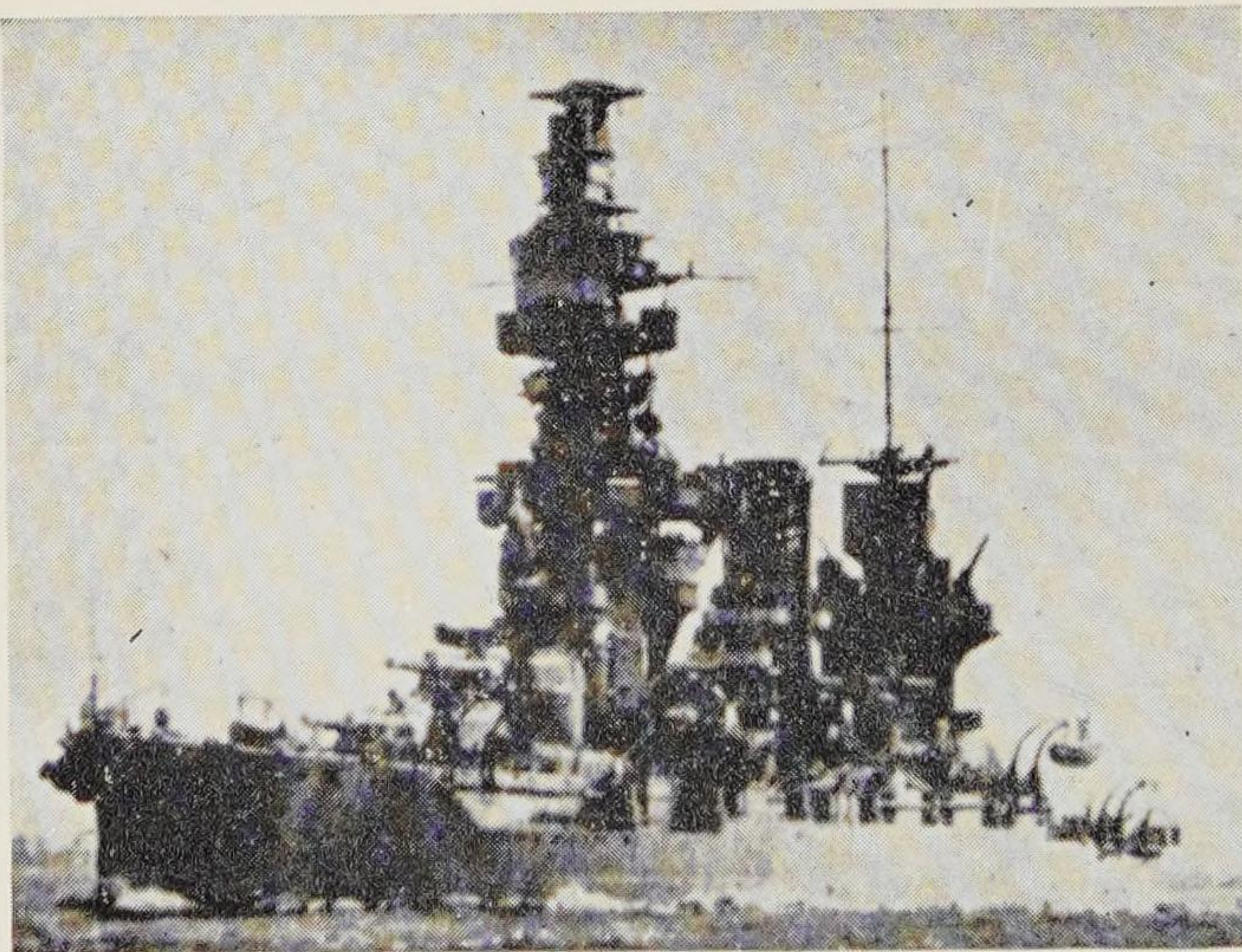
Displacement :	29,330 T. (WS), 31,785 t. (WN)
Dimensions :	Length : 653.03 ft.-205.13 m (o.a), 665.00 ft.-202.69 m. (w.l.)
	Beam : 94.00 ft.-28.65 m. (w.l.) Draught : 28.50 ft.-8.62 m. (mean)
Armament :	Guns : 12-14 in., 16-5.9 in., 4-1 in. AA. Torpedo Tubes : 6-21 in. (under waterline)
Machinery :	Curtis Turbines S.H.P. : 40,000 Speed : 23.0 kts.
Complement :	1,193
Displacement :	34,700 T. (WS), 39,154 t. (WT)
Dimensions :	Length : 698.03 ft.-212.75 m. (o.a.), 689.01 ft.-210.00 m. (w.l.)
	Beam : 100.53 ft.-30.64 m. (w.l.) Draught : 31.79 ft.-9.69 m. (mean)
Armament :	Guns : 12-14 in., 14-5.9 in., 8-5 in. AA., 20-25 mm. AA.
Machinery :	Kanpon Turbines S.H.P. : 76,889 Speed : 24.7 kts.
Complement :	1,296
Data :	(FUSO) 1) At completion., 2) At conversion.

FUSO (2)

The battleship *FUSO* in 1924, with the cruiser *CHIKUMA*, the flagship of the first Submarine Squadron, in the right background. Completed in 1915 together with battleships *HARUNA* and *KIRISHIMA*, the *FUSO* came to possess the so-called pagoda mast where various command centres were concentrated. Anti-torpedo net casting device on the sides was removed from all battleships by 1926.



BB FUSO.



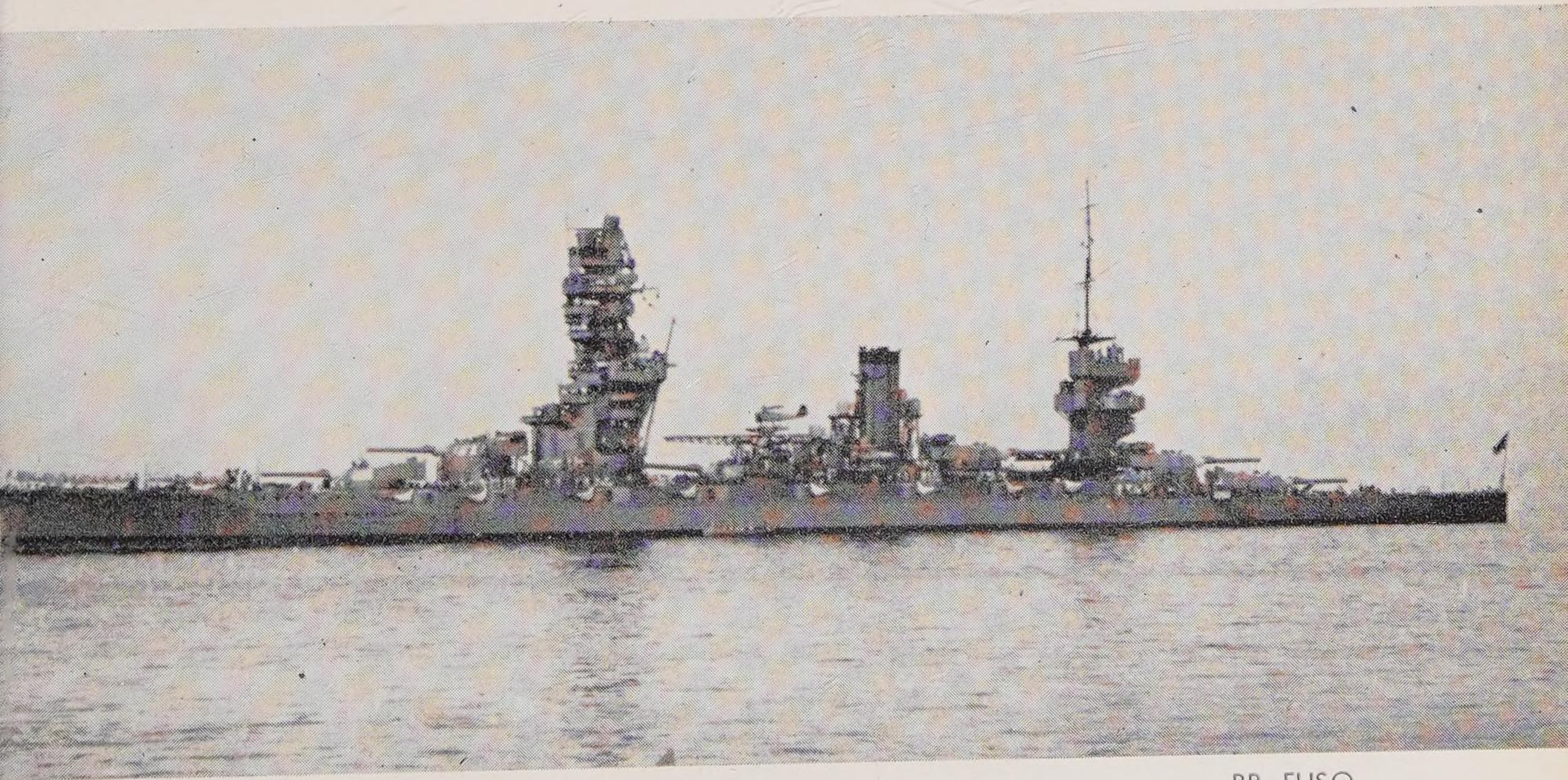
BB FUSO.

FUSO (3)

The battleship *FUSO* in manoeuvre immediately before the Pacific War.

FUSO (4)

The battleship *FUSO* at Tokyo Bay in October 1935. Long continued debates centred around the advantages and disadvantages of mounting the main armament in these days between the six twin turrets of the *Fuso* Class and the four triple turrets of 14-in. guns of the *Pennsylvania* Class of the U.S. The Japanese way was considered better for attacking while the U.S. arrangement was thought superior from the defensive point of view.



BB FUSO.

YAMASHIRO (1)

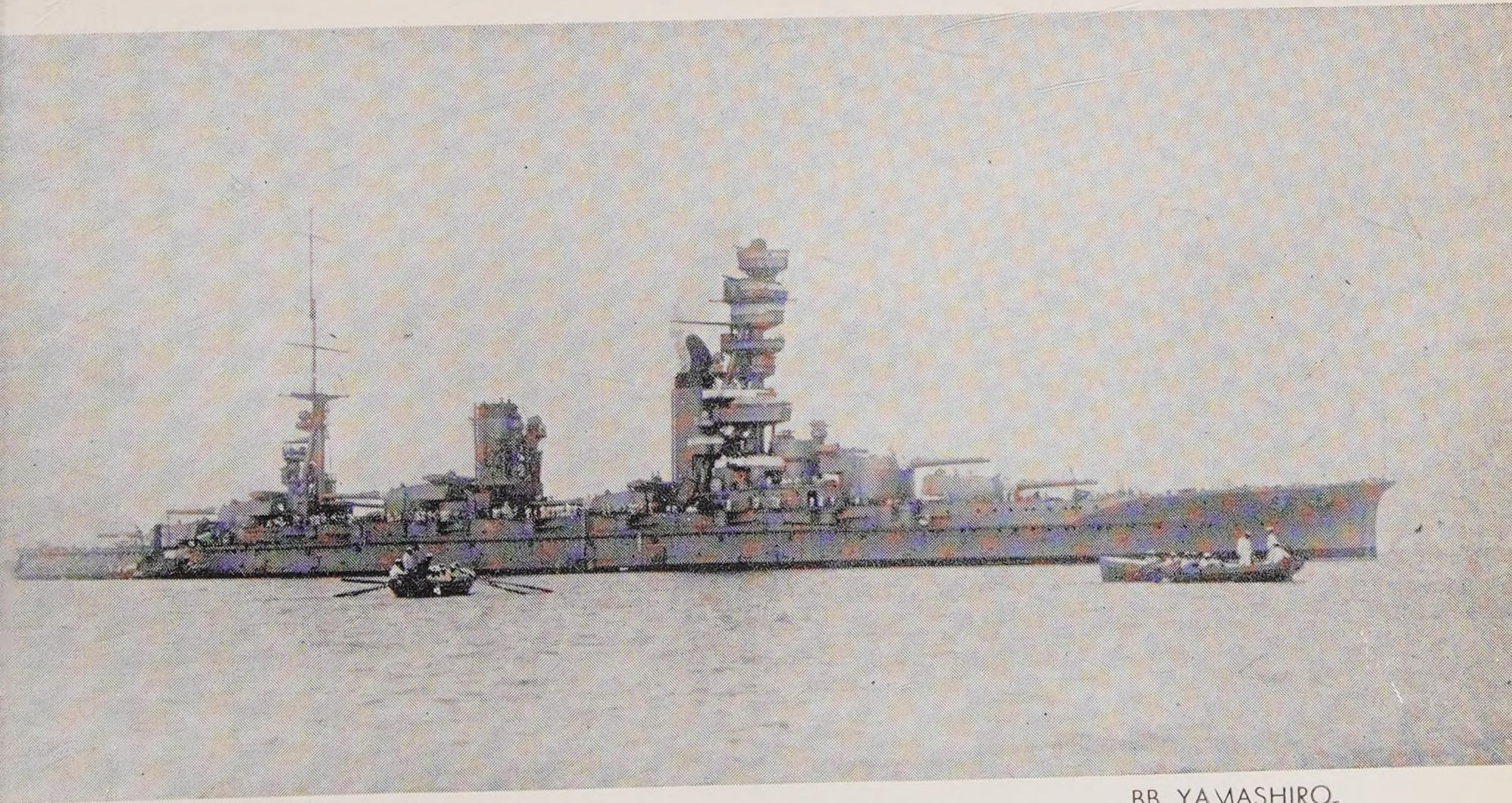
The battleship *YAMASHIRO* at Yokosuka in April 1917. With completion of the *YAMASHIRO*, Japan came to possess a super-dreadnought which was 10,000 tons heavier than the *SETTSU*.

BB YAMASHIRO.



YAMASHIRO (2)

The *YAMASHIRO* at Yokosuka in 1928. Note the modified pagoda mast, the searchlight tower in front of the No.2 funnel, etc. The anti-torpedo net device on the sides had been removed by this time.

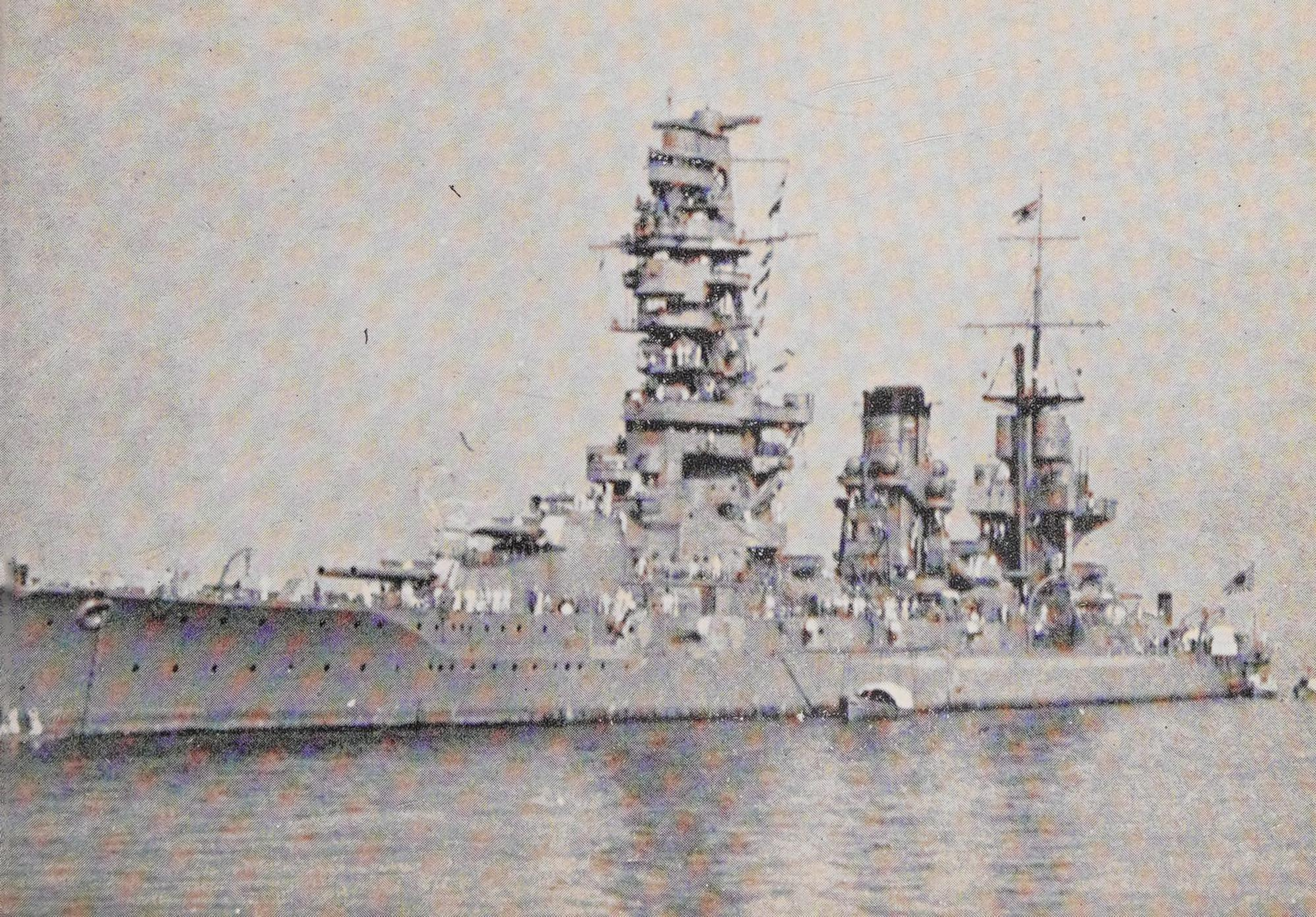


BB YAMASHIRO.

YAMASHIRO (3)

The battleship *YAMASHIRO* after conversion. Through experience gained with her sister ship *FUSO*, the catapult of the *YAMASHIRO* was installed at stern instead of the top of the No.3 turret. Pictured in October 1935, the *YAMASHIRO* was then the flagship of the Combined Fleet.

BB YAMASHIRO.



ISE Class

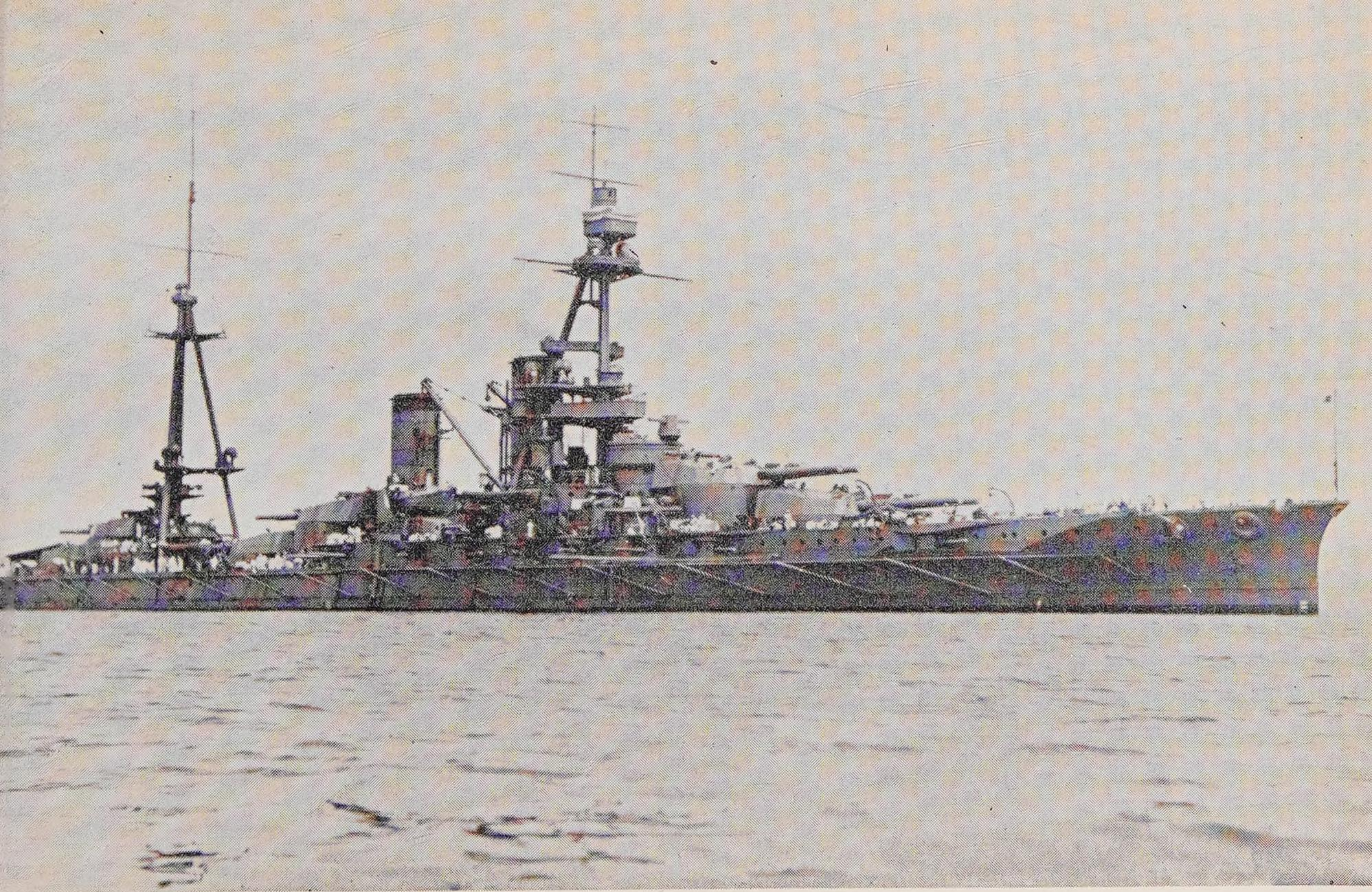
<i>Name</i>	<i>Completed</i>	<i>Converted</i>	<i>Fate</i>
ISE	15-12-17 Nagasaki	1) 23- 3-37 2) 5- 9-43	Scrapped after war
HYUGA	30- 4-18 Kawasaki	1) 7- 9-36 2) 30-11-43	Scrapped after war

Project: 1912 Emergency Expansion Programme

History: Improvement of the *Fuso* Class, the *Ise* Class ships differed in arrangement of the Nos. 3 and 4 main turrets. After conversion of 1936-37. they came to possess the appearance which somewhat resembled the *Idaho* Class ships of the U.S. After the outbreak of the Pacific War, the Nos. 5 and 6 main turrets were removed for installation of the flight deck, to make the two battleships into the unprecedented carrier-battleships. They, however, had no opportunity to prove the merits of the new concept as the war turned against Japan. In the Battle of the Philippine Sea, they comprised the heart of the Japanese task force. Despite heavy damage both survived the battle and returned to Kure, where they remained inoperative until the end of war due to damage by U.S. air raids.

Comparable ships: *Royal Sovereign* (Br.), *Queen Elizabeth* (Br.), *Idaho* (U.S.), *California* (U.S.)

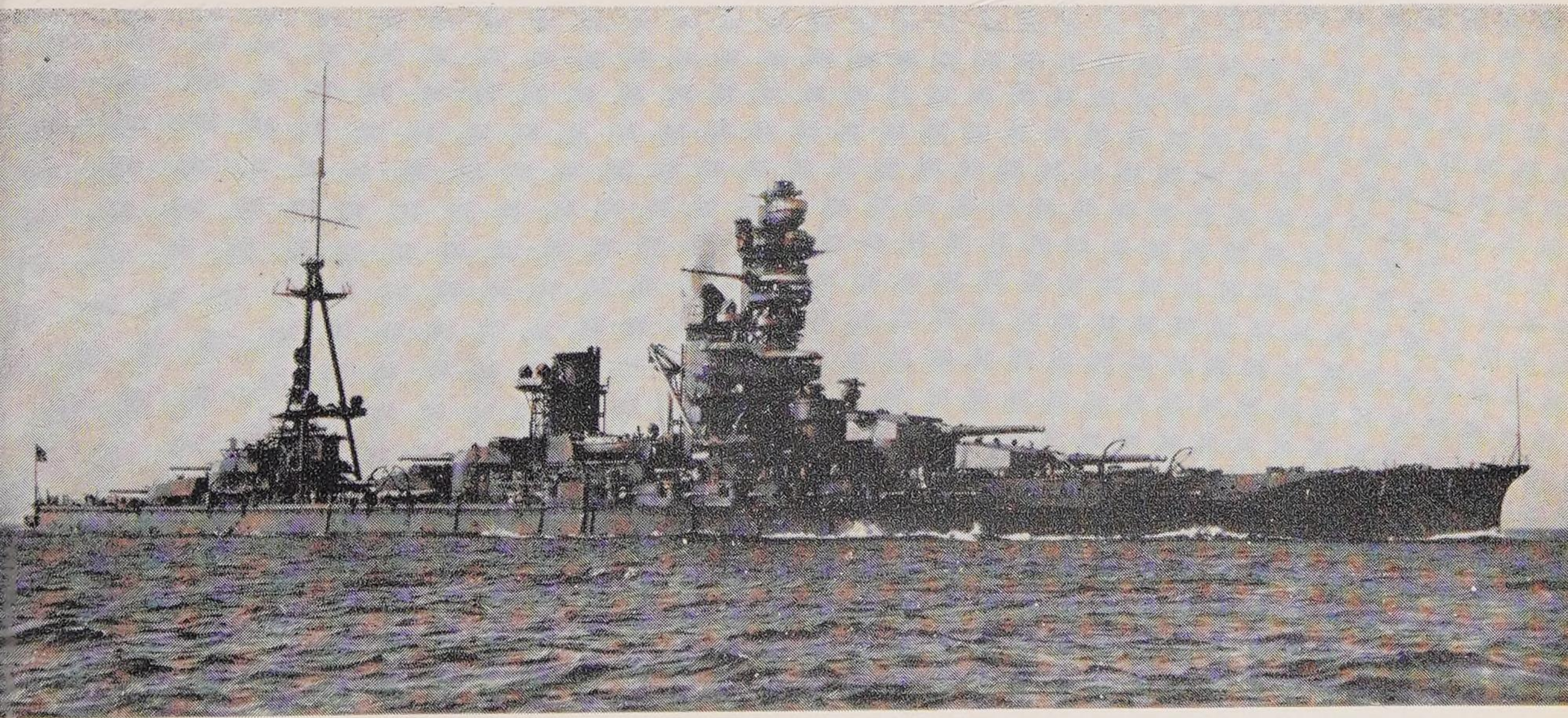
The battleship *ISE* at Yokohama in April 1922 to welcome the Prince of Wales.



Displacement : 29,990 T. (WS), 32,063 t. (WN)
Dimensions : *Length :* 683.03 ft.-208.18 m. (o.a.), 675.00 ft.-205.74 m. (w.l.)
Beam : 94.00 ft.-28.65 m. (w.l.) *Draught :* 27.08 ft.-8.86 m. (mean)
Armament : *Guns :* 12-14 in., 20-5.5 in., 4-1 in. AA. *Torpedo Tubes :* 6-21 in. (under waterline)
Machinery : Curtis Turbines S.H.P.: 45,000 *Speed :* 23.6 kts.
Complement : 1,360
Displacement : 35,800 T. (WS), 40,169 t. (WT)
Dimensions : *Length :* 708.04 ft.-215.80 m. (o.a.), 700.03 ft.-213.36 m. (w.l.)
Beam : 104.12 ft.-31.75 m. (w.l.) *Draught :* 31.00 ft.-9.45 m. (mean)
Armament : *Guns :* 12-14 in., 16-5.5 in., 8-5 in. AA., *Planes :* 3 *Catapults :* 1
Machinery : Kanpon Turbines S.H.P. : 80,000 *Speed :* 25.25 kts.
Complement : 1,376
Data : 1) At completion., 2) At first conversion (HYUGA)., 3) At second conversion (ISE)

ISE (2)

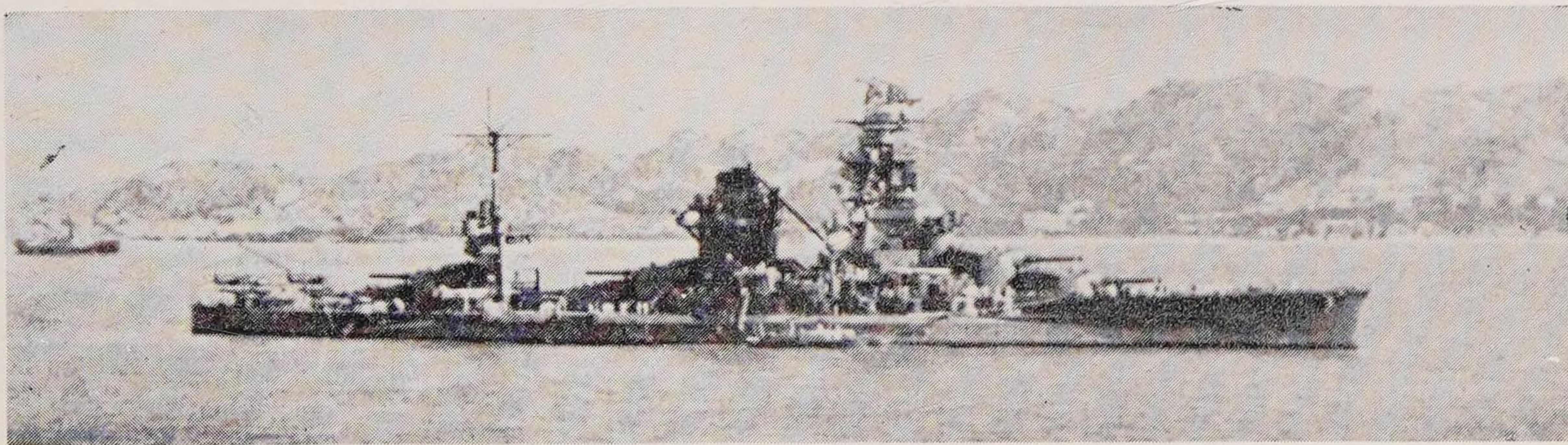
The battleship *ISE* in September 1931. Note the unique pagoda mast which accommodates the main gun direction finder at top. Searchlight platform was installed around the No.2 funnel and the main mast was extended.



BB ISE.

ISE (3)

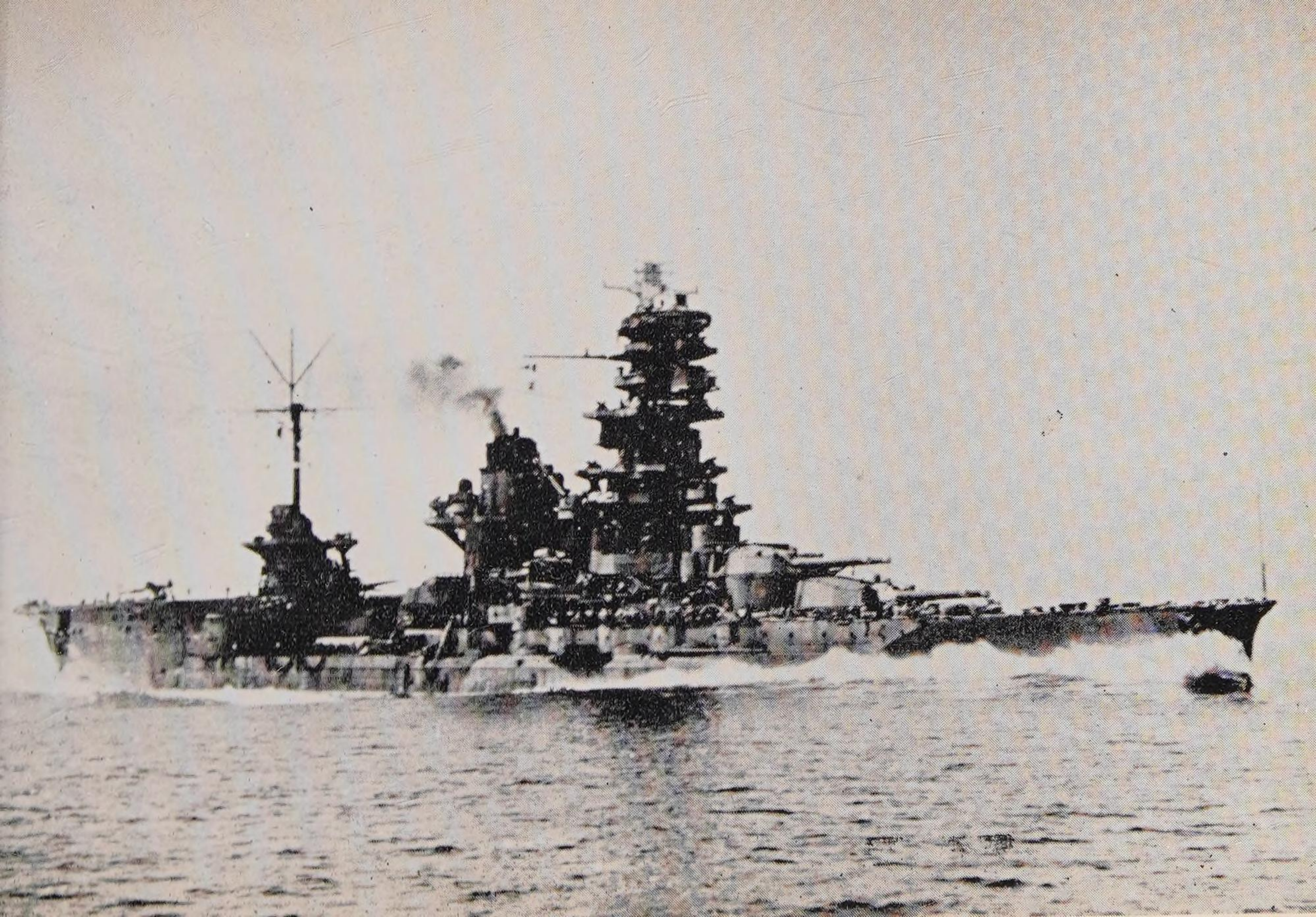
The battleship *ISE* at Amoy in October 1938. Astern of the ship are seen two Type 95 floatplanes on the catapults. Identification of the *ISE* from her sister ship *HYUGA* may be based on the different relative location of the main mast and the aft bridge. The *ISE*, after conversion, had ten 25-mm. (1-in) machine gun twin turrets and their fire control system.



BB ISE.

ISE (4)

The carrier-battleship *ISE* at the official full speed trial run on 24th August 1943. Defeat at Midway forced the Japanese Navy to map out an emergency carrier construction programme under which a total of four battleships of the *Ise* and *Fuso* classes were to become carrier-battleships. But, only two ships of the *Ise* Class were rebuilt, those of the *Fuso* Class being withdrawn from the programme after the Battle of the Marianas. Armament of the carrier-battleship *ISE* comprised eight 36-cm. main guns, no secondary guns, sixteen 12.7-cm. (5-in.) anti-aircraft guns and six 12-cm. (4.7-in.) rocket guns. She was originally scheduled to carry twenty-two 13-Shi experimental dive bombers (Judy) but the plane type was later changed to 14-Shi floatplane dive bombers (Paul).



HYUGA (left) and **ISE** (right)

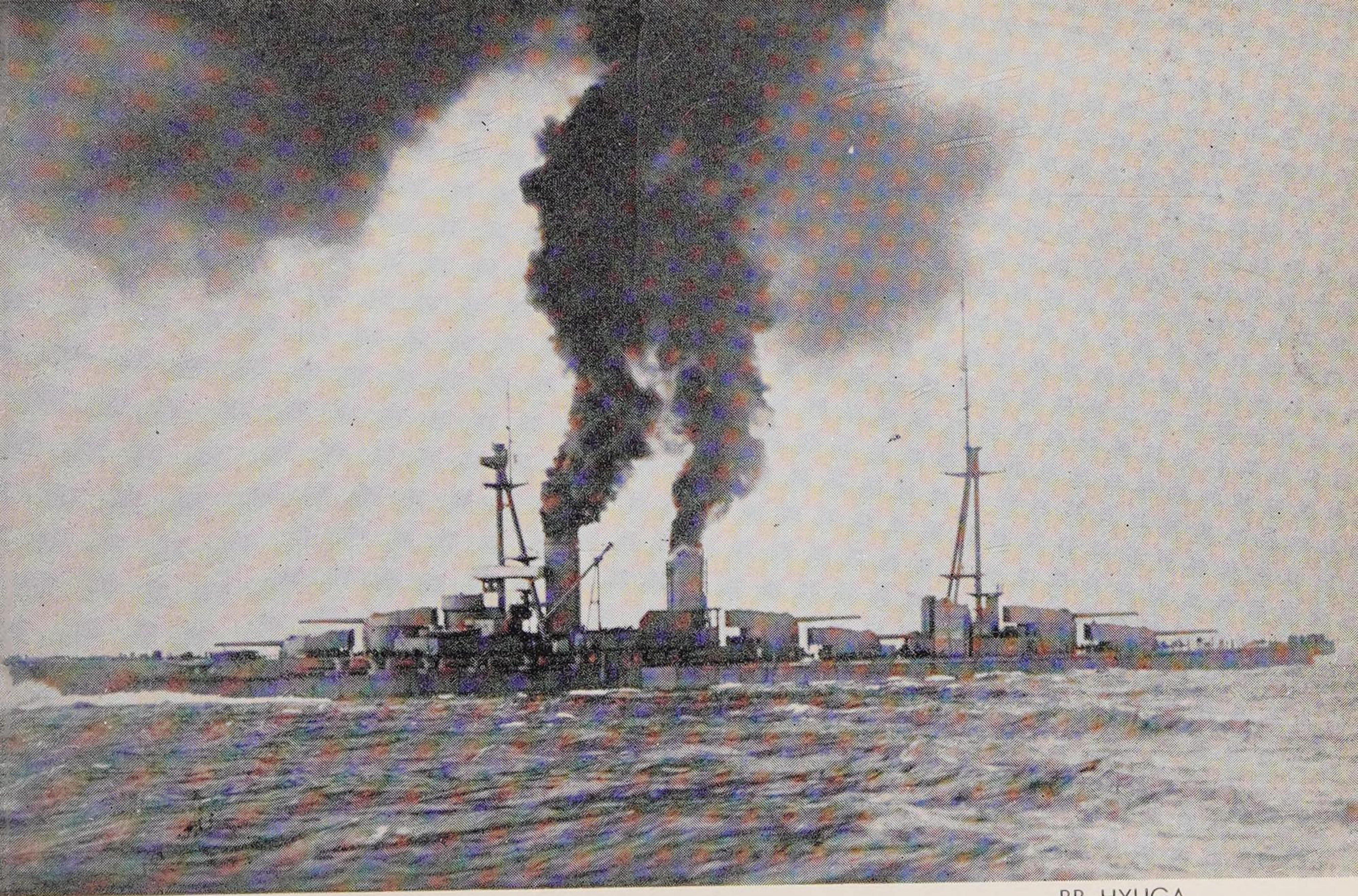
The battleships *ISE* and *HYUGA* off Tateyama in the summer of 1923, in their days of the pure tripod masts.



BBs HYUGA & ISE.

HYUGA (1)

The battleship *HYUGA* shortly after completion in late April 1918 at the Kawasaki Shipyard. For efficient fire control and protection, the six main gun turrets are grouped into three, a distinction from the *Fuso* Class ship.

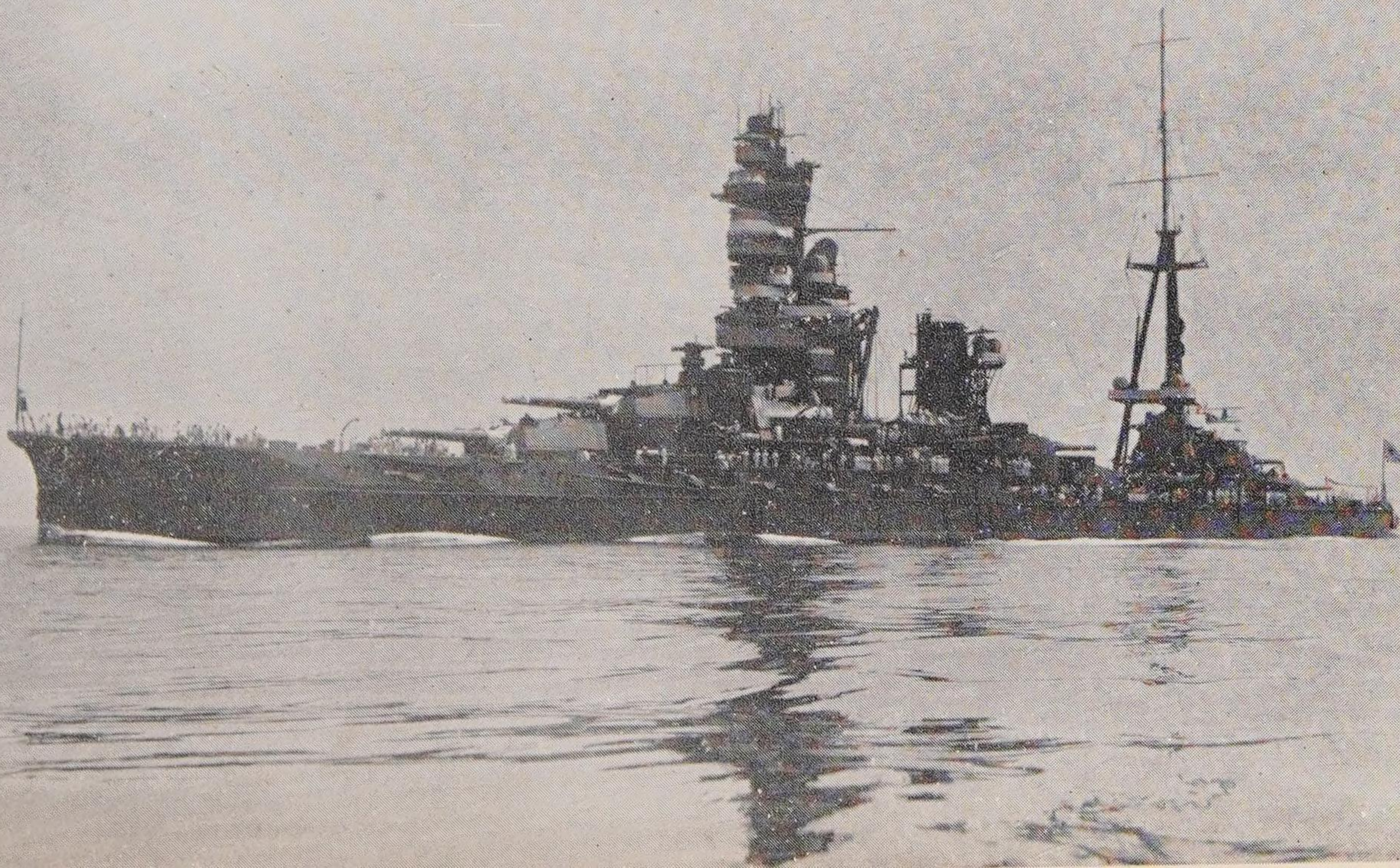


BB HYUGA.

HYUGA (2)

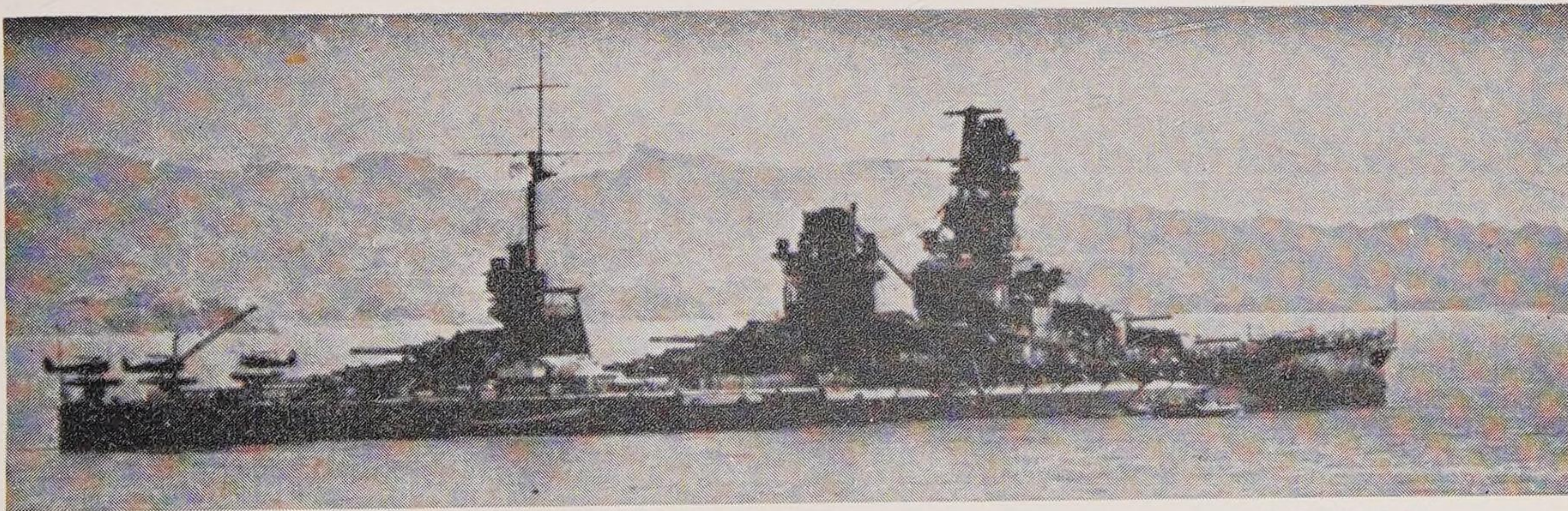
The battleship *HYUGA* in 1932. The pagoda mast was completed between 1930-31 as was the case with the *ISE*. At that time the ship was not yet equipped with the catapult although the derrick was installed for floatplanes. The ship's living quarters were notoriously narrow.

BB HYUGA.



HYUGA (3)

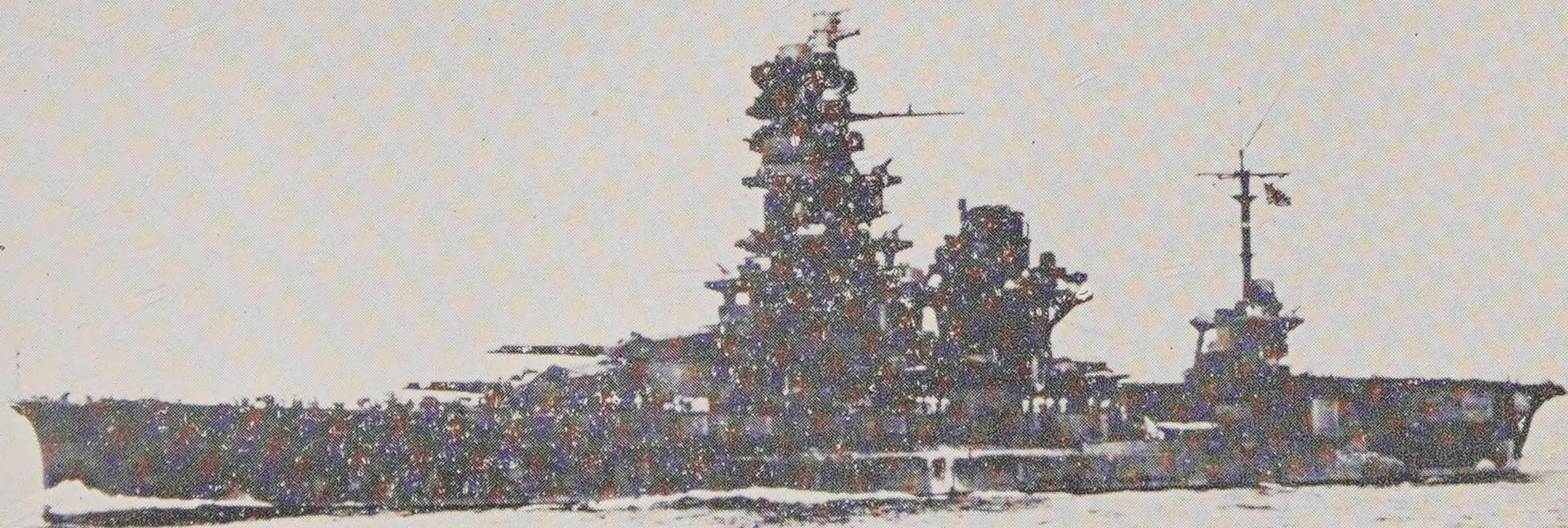
The battleship *HYUGA* at Amoy on 19th December 1938. After conversion in 1936, the *HYUGA* was equipped with mixed anti-aircraft armament of 40-mm. (1.6-in.) and 13-mm. (0.5-in.) guns in twin mountings. In 1940, however, these guns were replaced by ten twin turrets of 25-mm. (1-in.) guns. Three Type 95 float biplanes are seen at the stern.



BB HYUGA.

HYUGA (4)

The carrier-battleship *HYUGA* as seen in November 1943. Nos. 5 and 6 main turrets and all of the secondary gun turrets were removed. The flight deck, the large hangar, two catapults were installed astern. Anti-aircraft armament was augmented to eight 12.7-cm. (5-in.) guns and nineteen triple turrets of 25-mm. (1-in.) guns. Atop the pagoda mast is the Type 2 Model 1 radar.



NAGATO Class

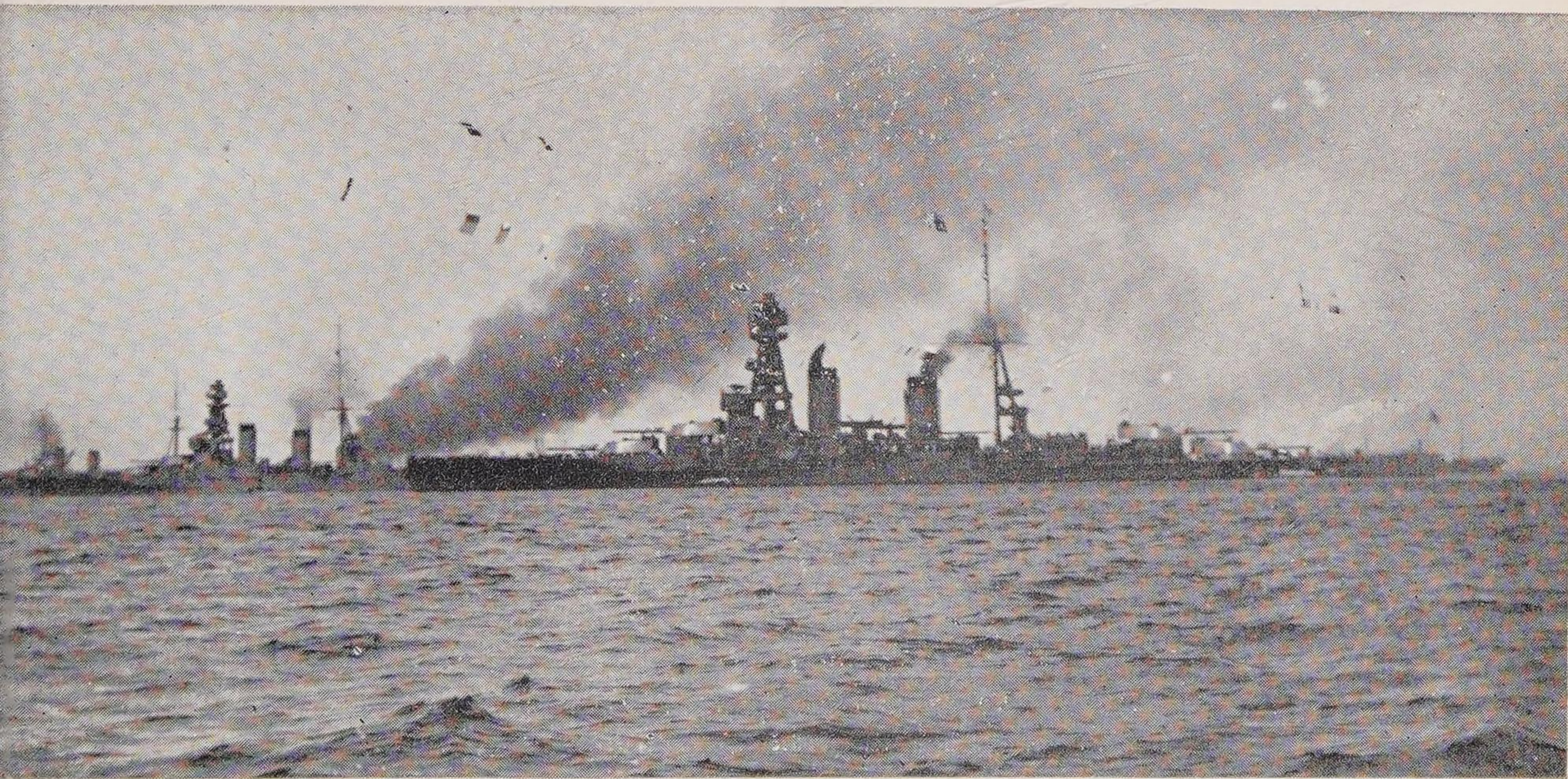
Name	Completed	Converted	Fate
NAGATO	25-11-20 Kure	1) 1924 2) 31-1-36	Lost 29-11-46, Bikini Atoll, U.S. A-bomb test
MUTSU	24-10-21 Yokosuka	1) 1924 2) 30-9-36	Lost 8-6-43, Inland Sea, accidental blast

Projects : The names of these two battleships will be long remembered as the representative battleships of the Imperial Japanese Navy and also the world's first capital ships to equip 40-cm. (16-in.) guns. Originally the two-stacker, the smokehood was installed on the No. 1 funnel in 1921. The middle part of the No. 1 funnel was bent rearward in 1924. Through conversion in 1936, the two funnels were replaced with a newly-designed single funnel.

During the Pacific War, the two battleships comprised the First Battleship Division, the *NAGATO* being the flagship of the Combined Fleet, until the appearance of the *YAMATO* and *MUSASHI*.

The *MUTSU* at anchor off Hashira-jima in the Inland Sea was sunk in a blast accident the cause of which remains mysterious even today. The *NAGATO* survived the war and was used as one the "guinea pigs" to determine the effect of the A-bomb blast conducted by the U.S. at the Bikini Atoll.

Comparable ships : *Nelson* (Br.), *Maryland* (U.S.)



BBs MUTSU & NAGATO.

Displacement :	32,720 T. (WS), 34,116 t. (WN), 700.49 ft.-213.50 m. (w.l.),		
Dimensions :	Length :	708.04 ft.-215.80 m. (o.a.),	Beam : 95.00 ft.-28.96 m. (w.l.)
	Draught :	30.01 ft.- 9.08 m. (mean)	
Armament :	Guns :	8-16 in., 20-5.5 in., 4-1 in. AA.	Torpedo Tubes : 8-21 in.
Machinery :	Gihon Turbines	S.H.P. : 80,000	Speed : 26.5 kts.
Complement :	1,333		
Displacement :	39,130 T. (WS), 43,581 t. (WT), 46,356 t. (WF)		
Dimensions :	Length :	734.03 ft.-224.94 m. (o.a.), 725.33 ft.-221.07 m. (w.l.)	
	Beam :	108.13 ft.-32.96 m. (w.l.)	Draught : 31.13 ft.-9.49 m. (mean)
Armament :	Guns :	8-16 in., 18-5.5 in., 8-5 in. AA., 20-25 mm. AA.	
	Planes :	3	Catapults : 1
Machinery :	Kanpon Turbines	S.H.P. : 82,300	Speed : 25.0 kts.
Complement :	1,368		
Data :	1) (NAGATO) At completion., 2) At conversion.		

NAGATO (2)

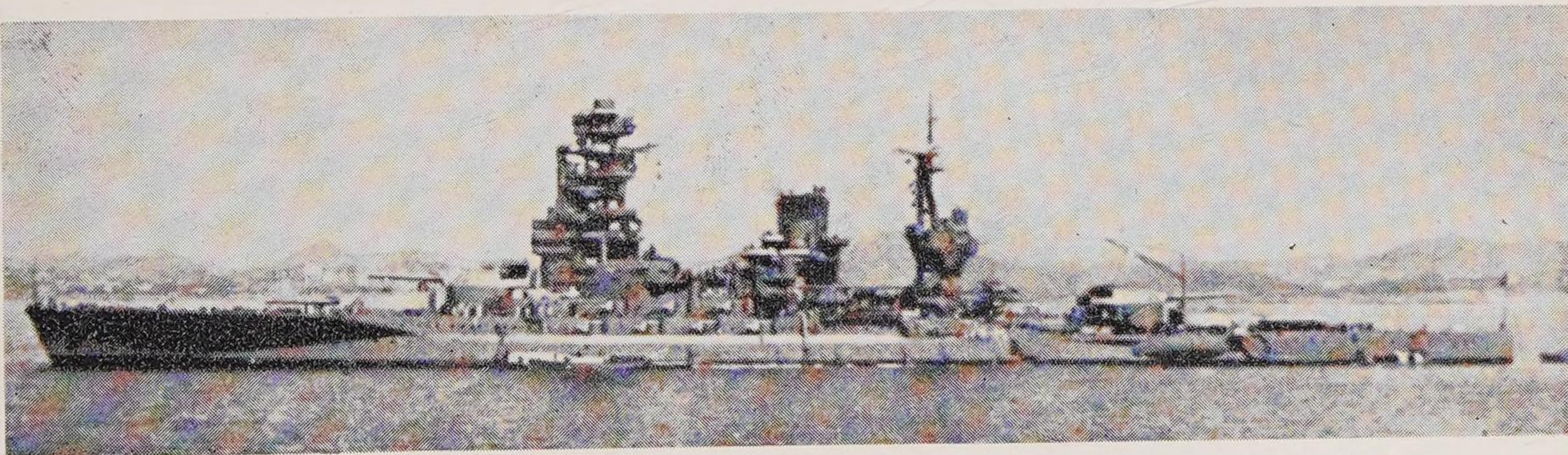
The battleship *NAGATO* in late 1920s. The pagoda mast and the unique No.1 funnel gave a distinct silhouette to the *Nagato* Class ships. They were the world's first capital ships to carry eight 40-cm. main guns.



BB NAGATO.

NAGATO (3)

The *NAGATO* as seen from a British warship at Amoy in 1938. Through conversion of 1936, displacement was increased by 6,000 tons. The single funnel with the searchlight platform, the reinforced pagoda mast, the derrick, and the long side bulge, etc, gave a new silhouette to the old battleship.

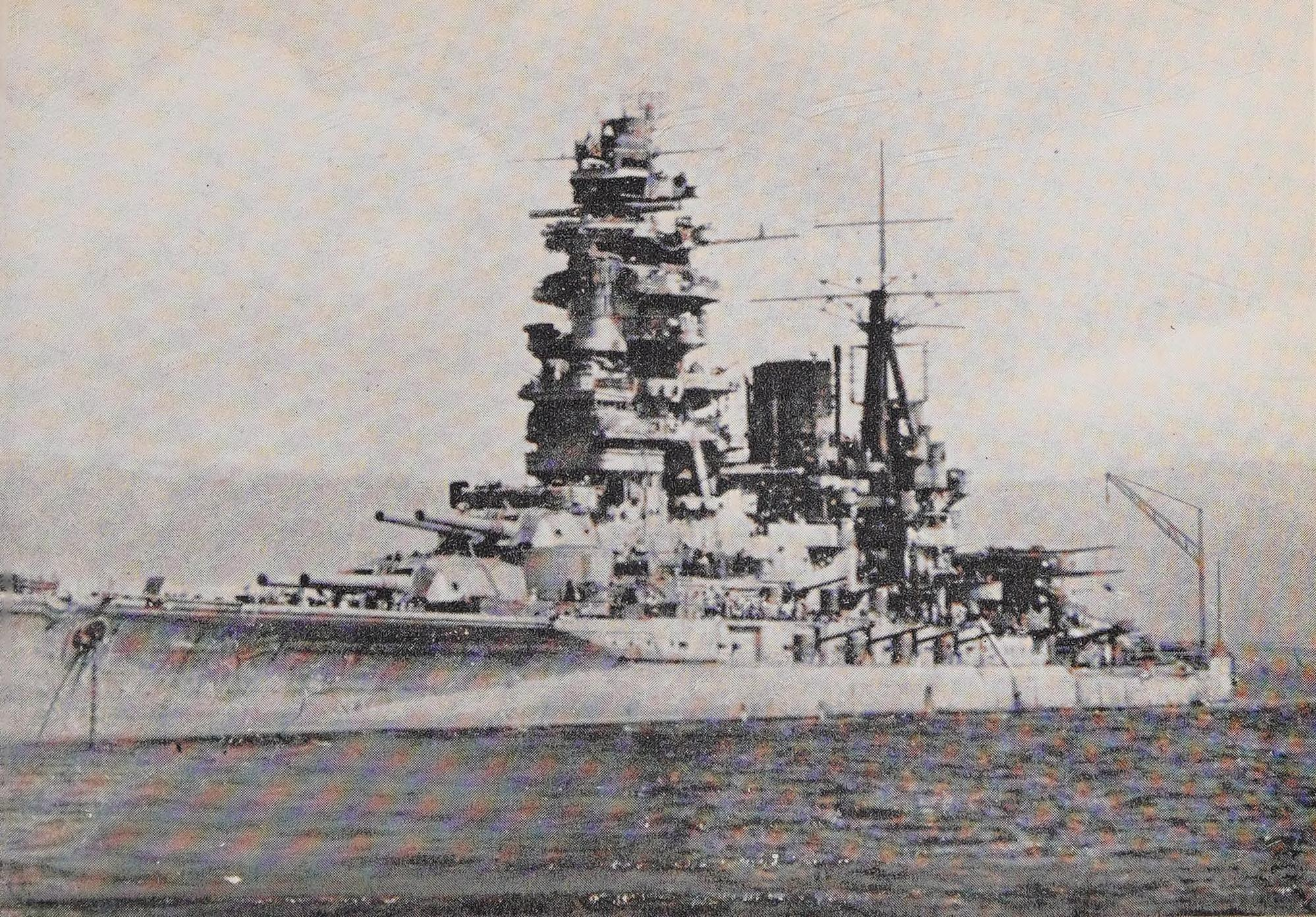


BB NAGATO.

NAGATO (4)

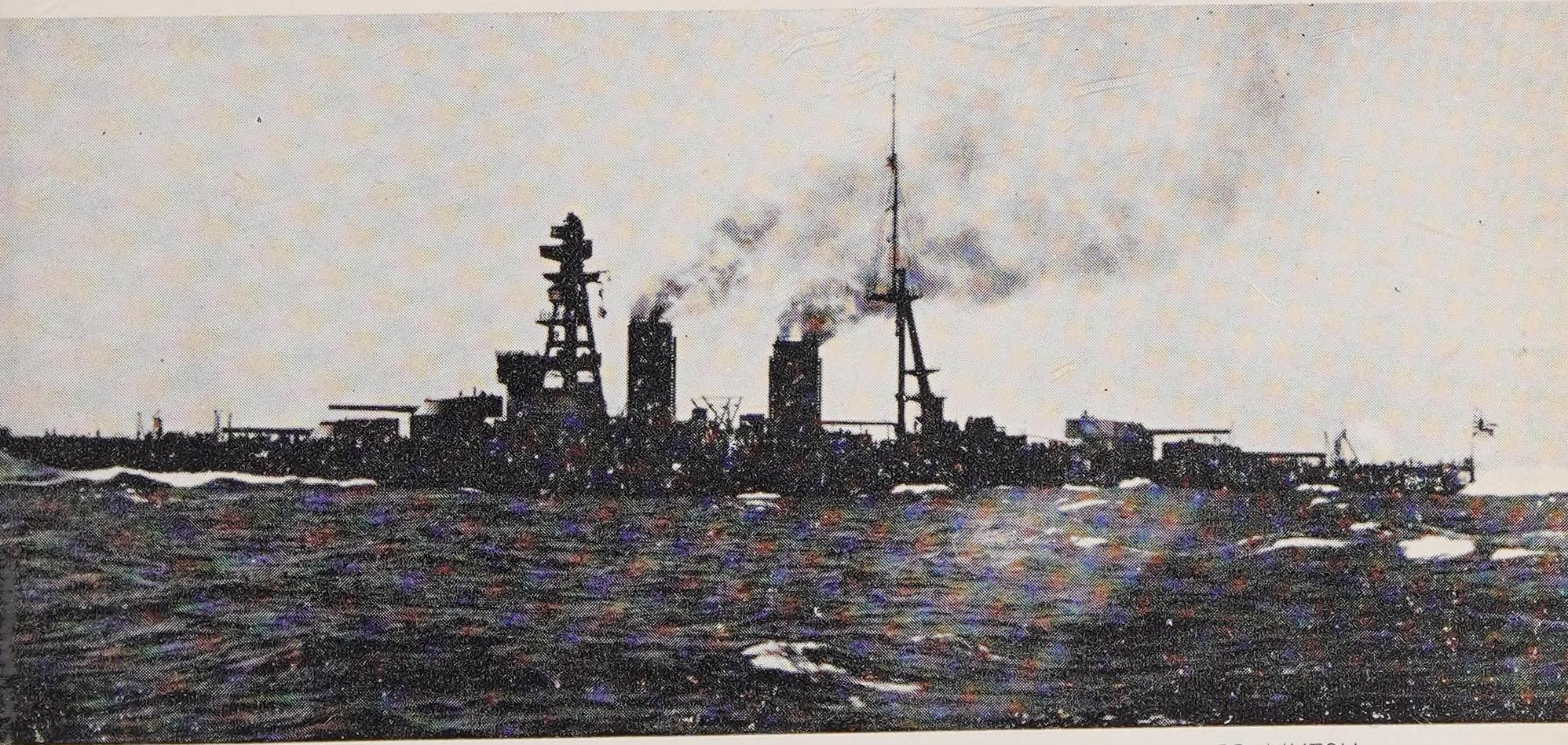
The *NAGATO* at anchor off Brunei on 22nd October 1944, prior to the Battle for Leyte Gulf. Atop the pagoda mast is seen the Type 2 Model 1 radar (No.21 radar) and on the side of the main mast is the Type 1 Model 3 (No.13) radar. A Type 0 single-float spotter biplane is seen at stern.

BB NAGATO.



MUTSU (1)

The battleship *MUTSU* at the official trial run on 24th October 1921, with 33,800 tons of displacement. Armament comprised eight 40-cm. 45-cal. guns in four twin turrets and her maximum speed was 26.5 kt.

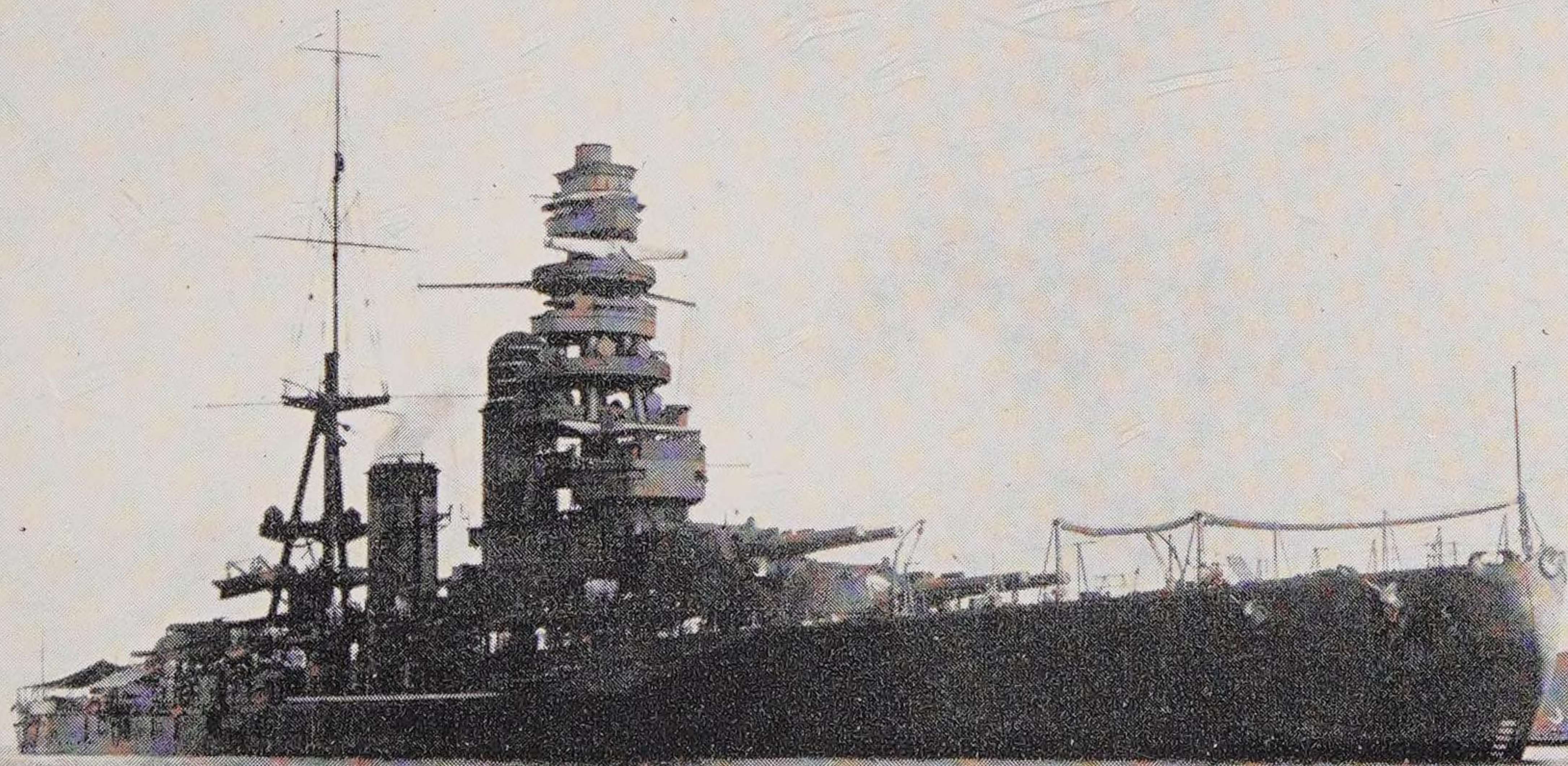


BB MUTSU.

MUTSU (2)

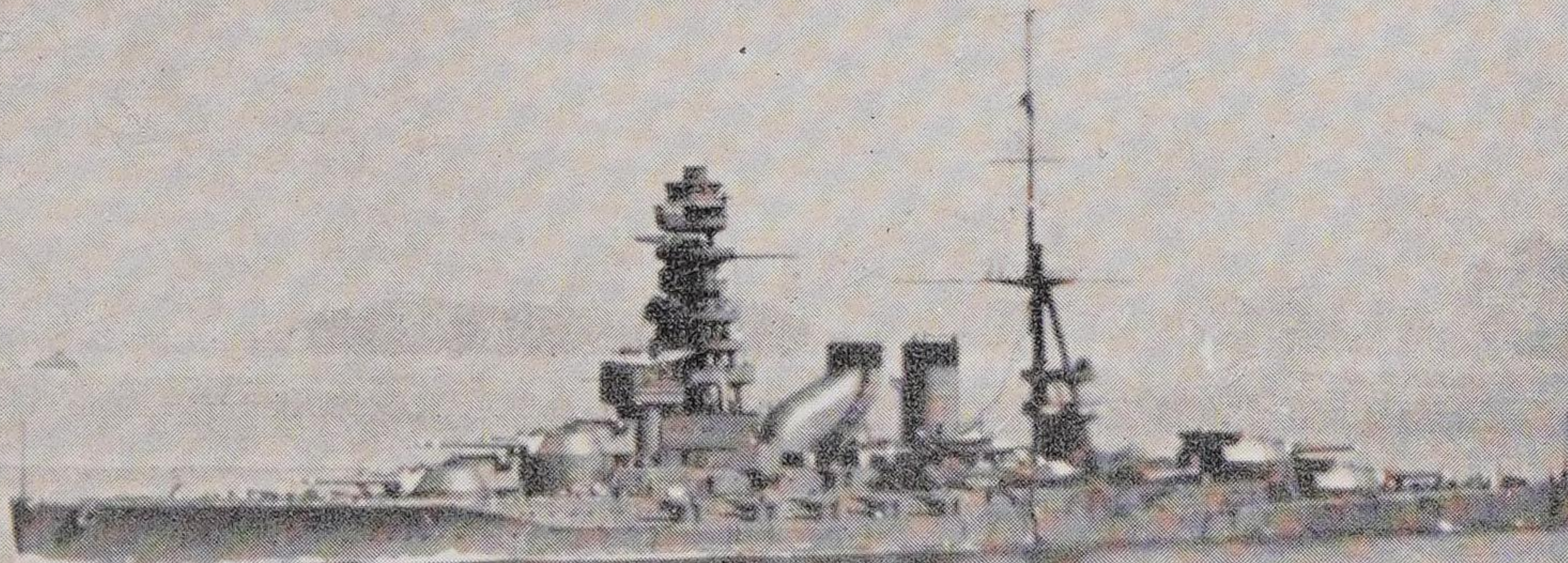
The *MUTSU* in 1923. The smokehood was installed on the No.1 funnel and searchlights installed on both masts.

BB MUTSU.



MUTSU (3)

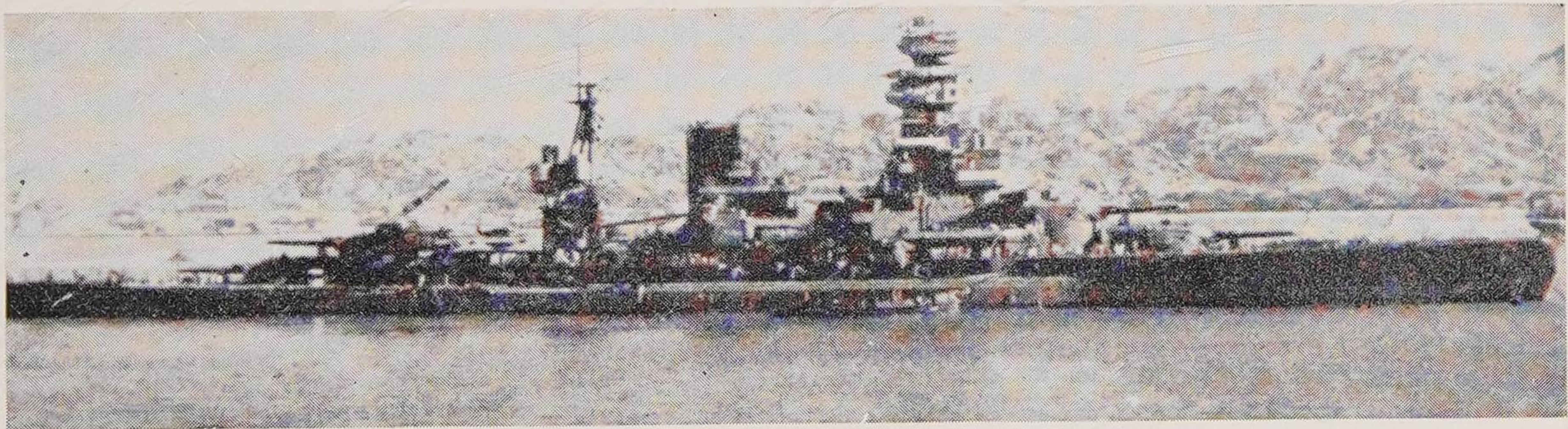
The *MUTSU* in the Inland Sea in 1924. It was in this year that the No.1 funnel was bent rearward.



BB MUTSU.

MUTSU (4)

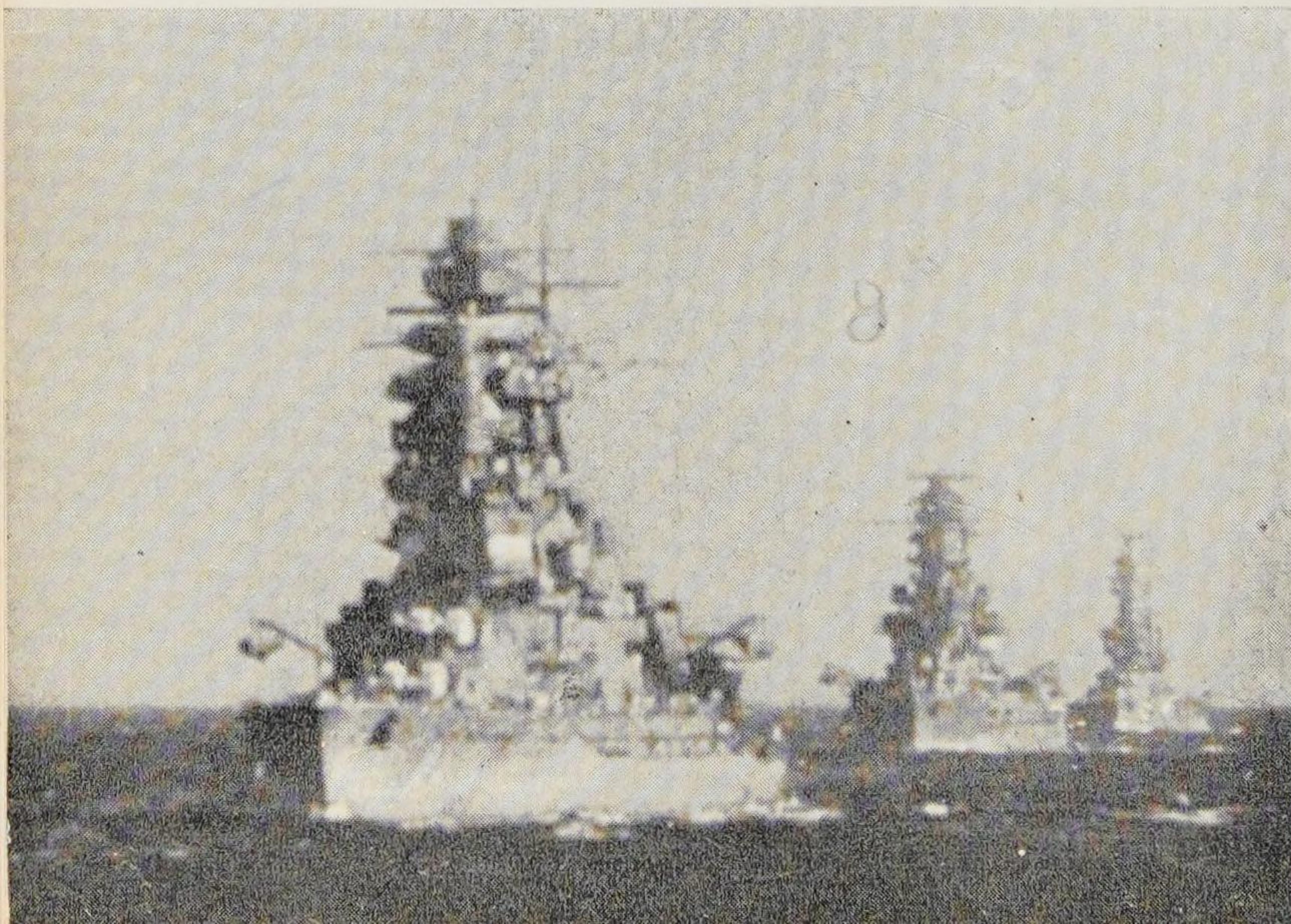
The *MUTSU* as seen from a British warship at Amoy in 1938. The main guns could be trained at the maximum elevation of 43 degrees and the shooting range became 37,000 metres (23 miles). Firing rate was one salvo every 40 seconds. The derrick on the *MUTSU* is positioned a little different from that of the *NAGATO*.



BB MUTSU.

Mighty column of the Combined Fleet during the great sea manoeuvre of 1940. From foreground, the *MUTSU*, *NAGATO*, and *FUSO*.

BBs *MUTSU*, *NAGATO* & *FUSO*.



The Salvo of *MUTSU*

The battleship *MUTSU* sending the salvo of 40-cm. guns.



YAMATO Class

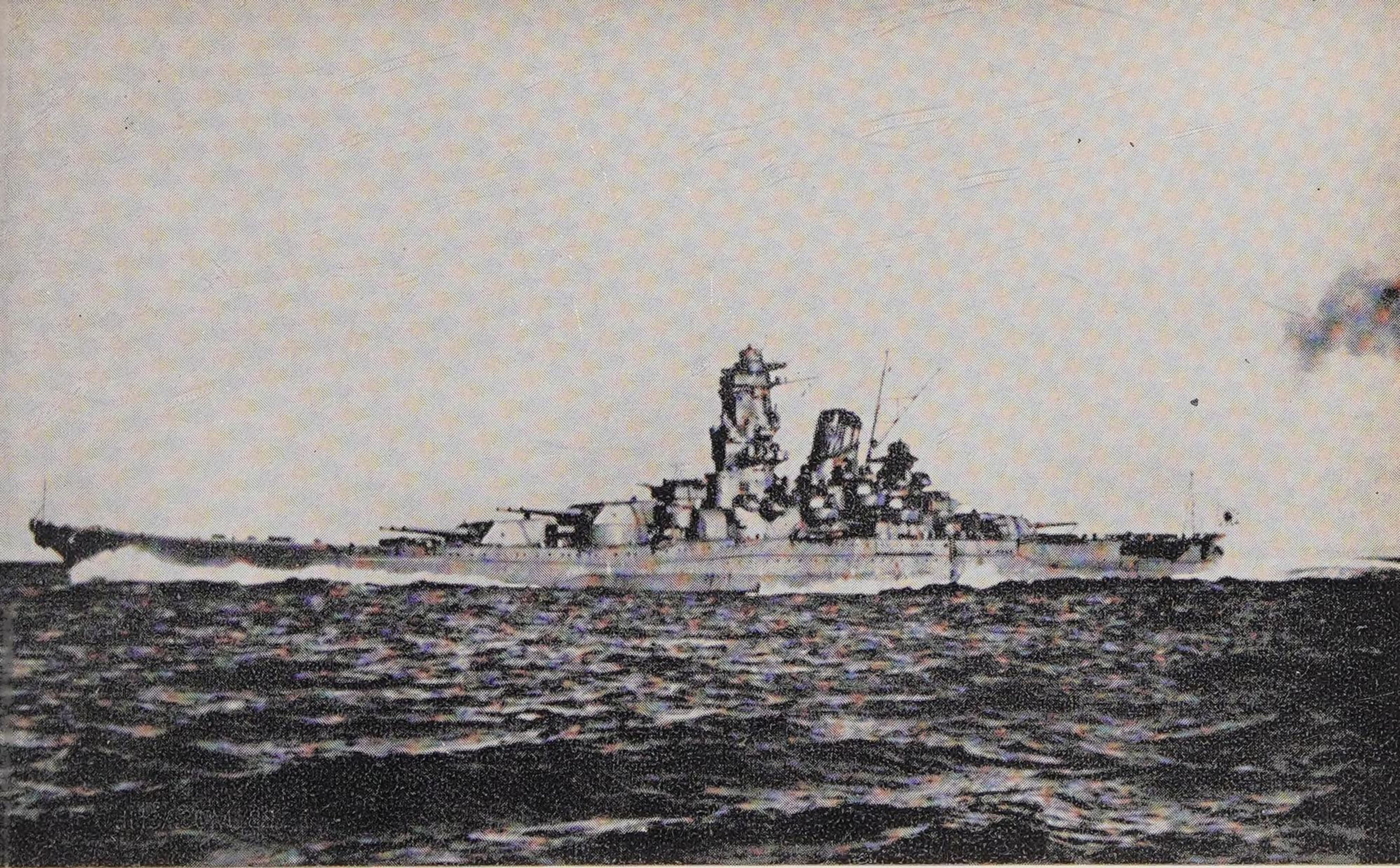
Name :	Completed	Fate
YAMATO	16-12-41 Kure	Lost 7-4-45, Battle off Bonomisaki, U.S. planes
MUSASHI	5- 8-42 Nagasaki	Lost 24-10-44, Battle for Leyte Gulf, U.S. planes
SHINANO	19-11-44 Yokosuka (as carrier)	Lost 29-11-44 off Shionomisaki, U.S. submarine
No. 111.		Construction began on 7-11-40 but the work was suspended and the ship was scrapped

Project : 3rd Reinforcement Programme of 1937 (*YAMATO* and *MUSASHI*), 4th Reinforcement programme of 1939 (*SHINANO* and *No.111*)

History : The *Yamato* Class battleships were the last and the largest to come out of the long-continued Age of Battleship. Their existence was kept under the top military secret. When the war ended and everything about them became known, they were no longer in existence. Thus, they are like the "Phantom Giants" to the average Japanese.

The *Yamato* Class was conceived as the trump card of the Japanese Navy to cope with quantity in the heated race of warship construction among the world's major powers. A unique product of a "have-not", it was intended to outrange enemy's 40-cm. gun battleships with the 46-cm. (18-in) guns. The Age of Battleship, however, was being superseded by the Age of Air even when their construction began. The *YAMATO* and *MUSASHI* were both sunk by aerial attacks.

The battleship *YAMATO* making 27 kt. at the official trial run in 1941. →



BB YAMATO.

The *SHINANO*, after the Battle of Midway, was converted into the world's biggest carrier. It was ironical then that she was sunk by a U.S. submarine only ten days after her completion and on her first operational cruise.

No.111, the fourth ship of the *Yamato* Class, was not completed due to the outbreak of the Pacific War.

Comparable ships: *Vanguard* (Br.), *Iowa* (U.S.), *Bismarck* (Gr.)

Displacement: 65,000 T. (WS), 69,100 t. (WT), 72,809 t. (WF)

Dimensions: Length: 862.90 ft.-263.00 m. (o.a.), 839.94 ft.-256.00 m. (w.l.)
Beam: 121.07 ft.-36.90 m. (w.l.) Draught: 35.58 ft.-10.86 m. (mean)

Armament: Guns: 9-18 in., 12-5 in. AA., 24-25 mm. AA., 4-12.7 mm. AA.
Planes: 7 Catapults: 2

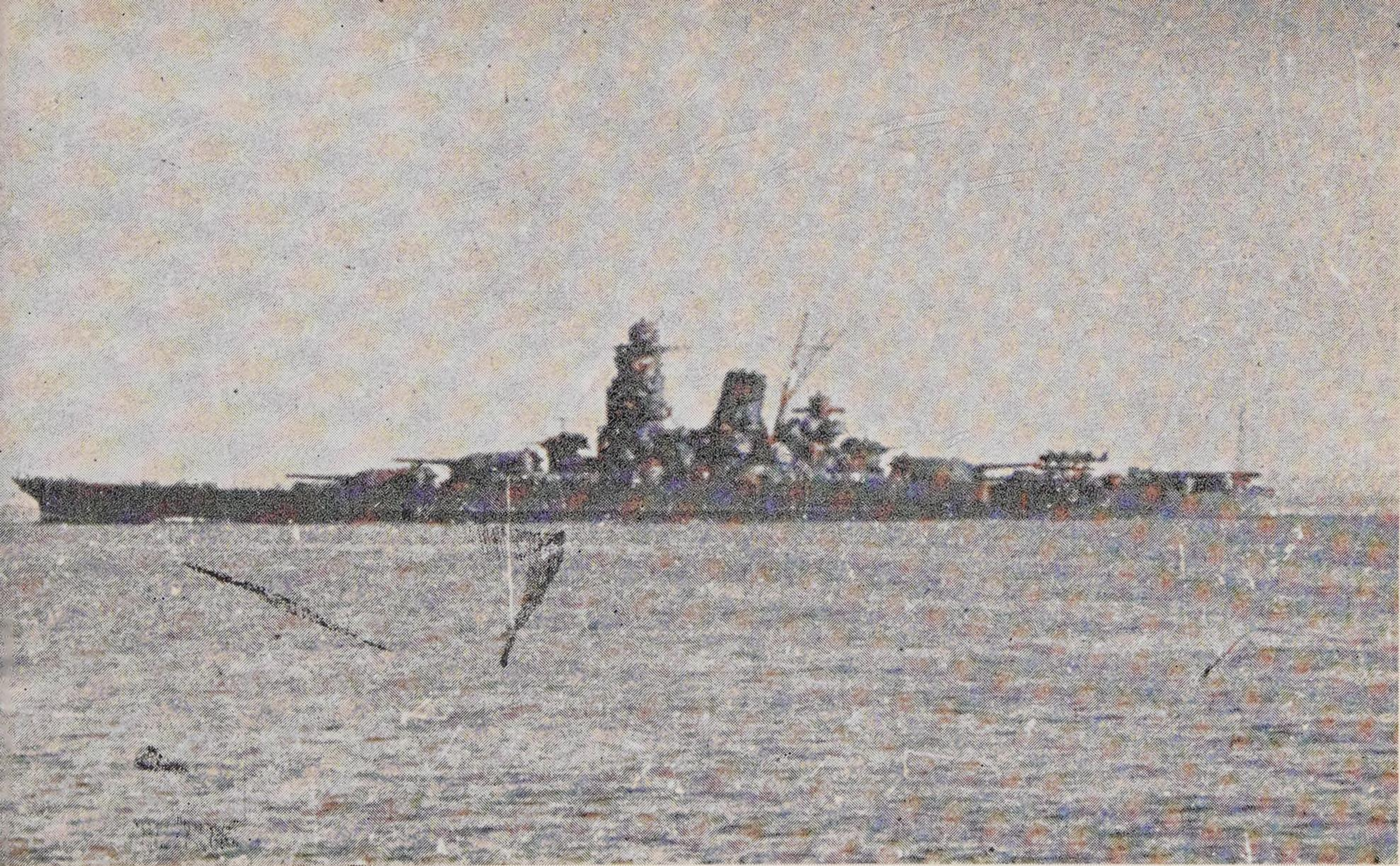
Machinery: Kanpon Turbines S.H.P.: 150,000 Speed: 27.46 kts.

Complement: 2,500

Data: At completion. (YAMATO)

The battleship *MUSASHI* at Bruney in October 1944.→

BB *MUSASHI*.



HEAVY CRUISERS

FURUTAKA Class

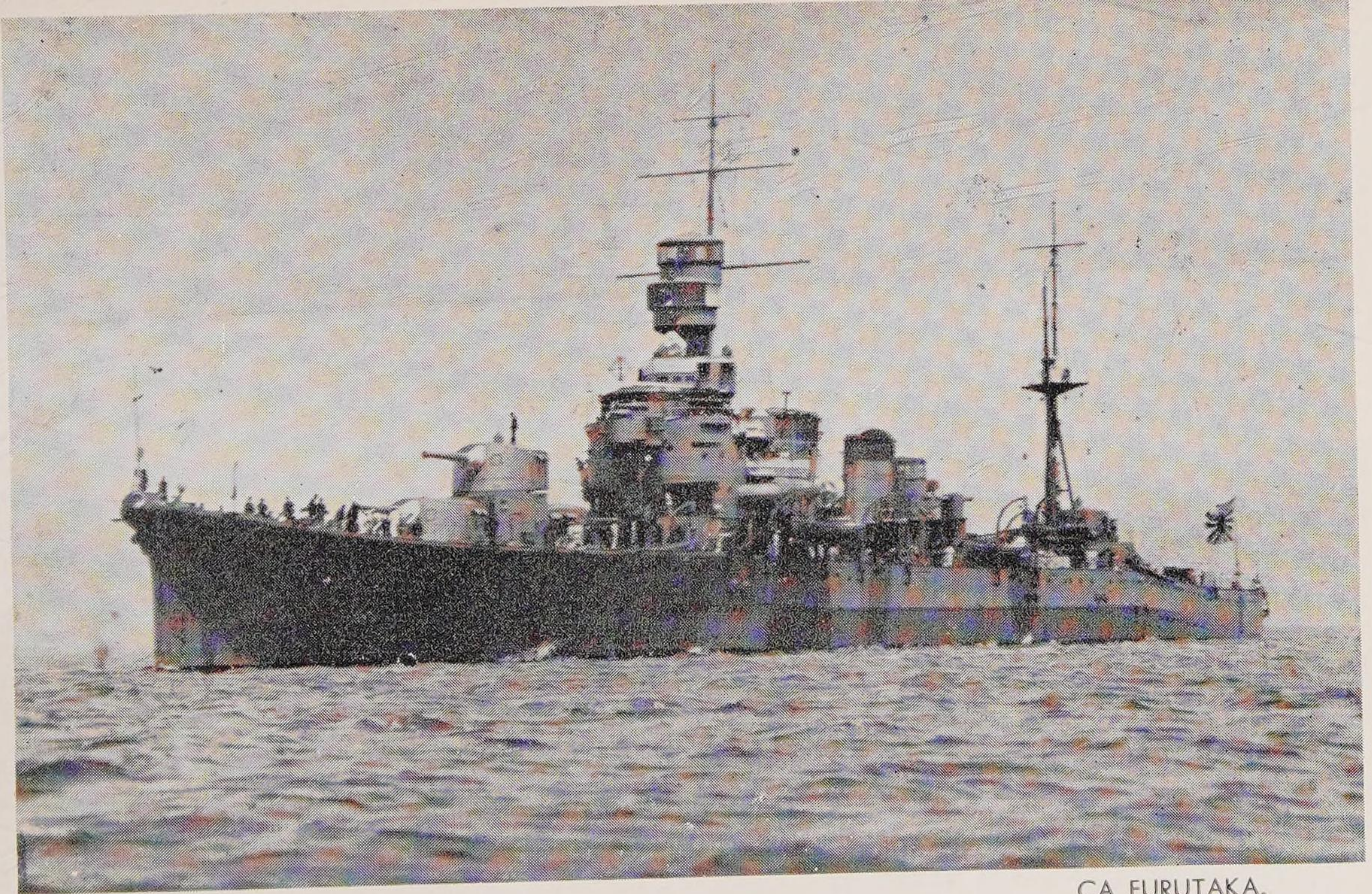
Name	Completed	Converted	Fate
FURUTAKA	31-3-26 Nagasaki	30- 4-36	Lost 12-10-42, Battle off cape Esperance, U.S. cruisers and destroyers
KAKO	20-7-26 Kawasaki	27-12-37	Lost 9-8-42, Entrance of Port Gabieng, U.S. submarine

Project : 1932 New Reinforcement Programme under Washington Naval Treaty.

History : The *FURUTAKA* and *KAKO* were the first and the second ships to equip the 20-cm. (7.9 in.) main guns, the armament which made them belong to the category of the heavy cruiser. Designed by the world famous naval architect, Vice Admiral Dr. Yuzuru Hiraga, they surprised the world in that their displacement was only 7,000 tons level. At time of completion, the 20-cm. guns were mounted in single turrets and the torpedo tubes were stationary. Through conversion of 1937-39, the main guns were mounted in twin turrets and the torpedo tubes in the quadruple swivel banks on the upper deck. In the Pacific War, the *Furutaka* Class ships and the *Aoba* Class ships comprised the Sixth Cruiser Division and engaged actively in the first line operations until they were sunk in the Solomons area.

Comparable ships : *York* and *Hawkins* (Br.)

The heavy cruiser *FURUTAKA*, 1930. →



CA FURUTAKA.

Displacement :	8,100 T. (WS).		
Dimensions :	Length : 602.16 ft.-183.53 m. (w.l.)		
	Beam :	51.74 ft.-15.77 m. (w.l.)	Draught : 18.26 ft.-5.56 m. (mean)
Armament :	Guns :	6-7.9 in., 4-3.1 in. AA.	Torpedo Tubes : 12-24 in. Planes : 1
Machinery :	Kanpon Turbines	S.H.P. : 102,000	Speed : 34.50 kts.
Displacement :	9,150 T. (WS), 10,507 t. (WT)		
Dimensions :	Length : 595.04 ft.-181.36 m. (w.l.)		
	Beam :	55.53 ft.-16.93 m. (w.l.)	Draught : 18.41 ft.-5.61 m. (mean)
Armament :	Guns :	6-8 in., 4-4.7 in. AA.	Torpedo Tubes : 8-24 in.
	Planes :	2	Catapults : 1
Machinery :	Kanpon Turbines	S.H.P. : 103,340	Speed : 32.95 kts.
Data :	(FURUTAKA)., 1) At completion., 2) At conversion		

KAKO

The heavy cruiser *KAKO*, 1930. The *Furutaka* Class was conceived at a time when light cruisers of 5,500 tons level (*Kuma*, *Isuzu* and *Naka* classes) were under construction. The techniques to minimize displacement and at the same time to equip the maximum armament, as proved a success in the *YUBARI*, were utilized for construction of the *Furutaka* Class. To achieve lighter weight, the 20-cm. main guns had to be mounted in the single makeshift turrets. Standard displacement of the ship at completion, however, was nearly 8,000 ton.

CA *KAKO*.



AOBA Class

Name	Completed	Converted	Fate
AOBA	20-9-27 Nagasaki	30-10-40	Scrapped after war
KINUGASA	30-9-27 Kawasaki	30-10-40	Lost 14-11-42, Battle of Guadalcanal, U.S. planes

Project : 1923 New Reinforcement Programme under Washington Naval Treaty.

History : Improved from but similar in main particulars to the *Furutaka* Class, the *Aoba* Class ships had from the beginning the main guns mounted in twin turrets and were also equipped with 12-cm. (4.7-in.) anti-aircraft guns. The torpedo tubes, however, were stationary until mounted in quadruple swivel banks on the upper deck through conversion of 1940. The *Aoba* Class cruisers differ from the *Furutaka* Class ships in silhouette in location of the main mast and the catapult. Operating with the *Furutaka* Class ships during the war, the *AOBA* survived the war despite damage received in several battles.

Comparable ships : *York* (Br.)

Displacement : 8,300 T. (WS)

Dimensions : Length : 602.33 ft.-183.58 m. (w.l.) Beam : 51.94 ft.-15.83 m. (f.l.)
 Draught : 18.73 ft.-5.71 m. (mean)

Aramament : Guns : 6-7.9 in., 4-4.7 in. AA. Torpedo Tubes : 12-24 in.
 Planes : 1 Catapults : 1

Machinery : Kanpon Turbines S.H.P.: 102,000 Speed : 34.5 kts.

The heavy cruiser *AOBA* at Yokosuka, 1927.

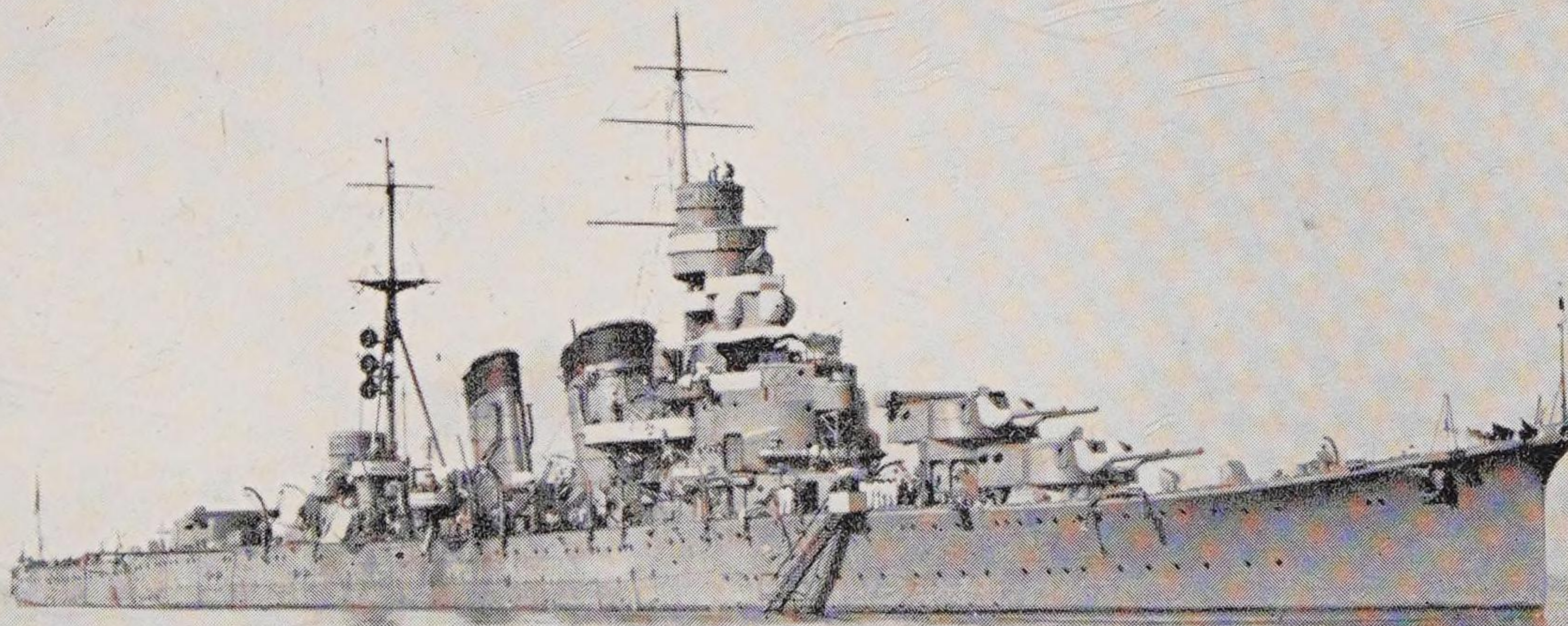


CA AOBA.

Displacement :	9,380 T. (WS), 10,822 t. (WT)		
Dimensions :	Length :	594.04 ft.-181.36 m. (w.l.)	
	Beam :	53.64 ft.-17.60 m. (f.l.)	Draught : 18.79 ft.-5.66 m. (mean)
Armament :	Guns :	6-8 in., 4-4.7 in. AA.	Torpedo Tubes : 8-24 in.
	Planes :	2	Catapults : 1
Machinery :	Kanpon Turbines	S.H.P.: 108,456	Speed : 33.4 kts.

KINUGASA

The *KINUGASA* in 1927. Speed indicators are on the main mast.



CA KINUGASA.

MYOKO Class

Name	Completed	Converted	Fate
MYOKO	31- 7-29 Yokosuka	1) 3/36 2) 30-4-41	Lost 8-7-46, Malacca Strait, British Navy
NACHI	26-11-28 Kure	1) 7/36 2) 3/40	Lost 8-1-44, Manila Bay, U.S. planes
ASHIGARA	20- 8-29 Kawasaki	1) 3/36 2) 6/40	Lost 8-1-45, Banka Strait, British submarine
HAGURO	25- 4-29 Nagasaki	1) 3/36 2) 28-12-39	Lost 16-5-45 off Penang, British destroyer

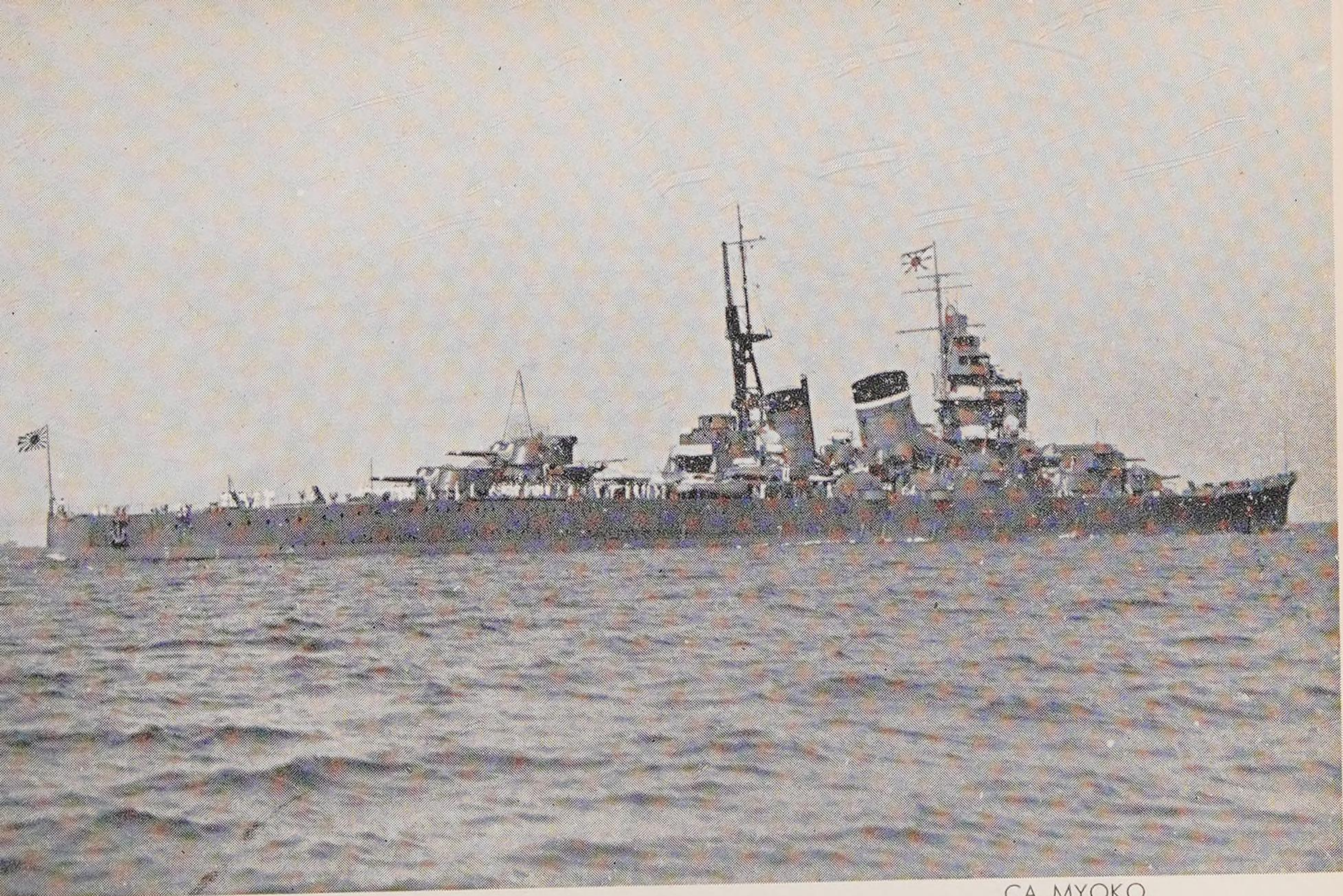
Project: 1923 New Reinforcement Programme under Washington Naval Treaty.

History: Designed by Vice Admiral Y.Hiraga, the *Myoko* Class ships were the first-generation 10,000-ton heavy cruisers to achieve the maximum armament and performance within the limitations of the Washington Naval Treaty. In 1936 the first conversion was made on these ships. The *ASHIGARA*, following conversion was dispatched in 1936 to England to take part in the international naval review in celebration of the Coronation of King George VI. Through the second conversion the *Myoko* Class ships were modernised and were thrown into the Pacific War to see active employment. Comprising the Fifth Cruiser Division, all of the *Myoko* Class ships were lost in action.

Comparable ships: *Pennsacola* (U.S.), *Northampton* (Br.), *Kent* (Br.), *Trento* (It.)

MYOKO (1)

The heavy cruiser *MYOKO* in 1932 as the first ship of the Fourth Cruiser Division, flying the bunting of the commander. →



CA MYOKO.

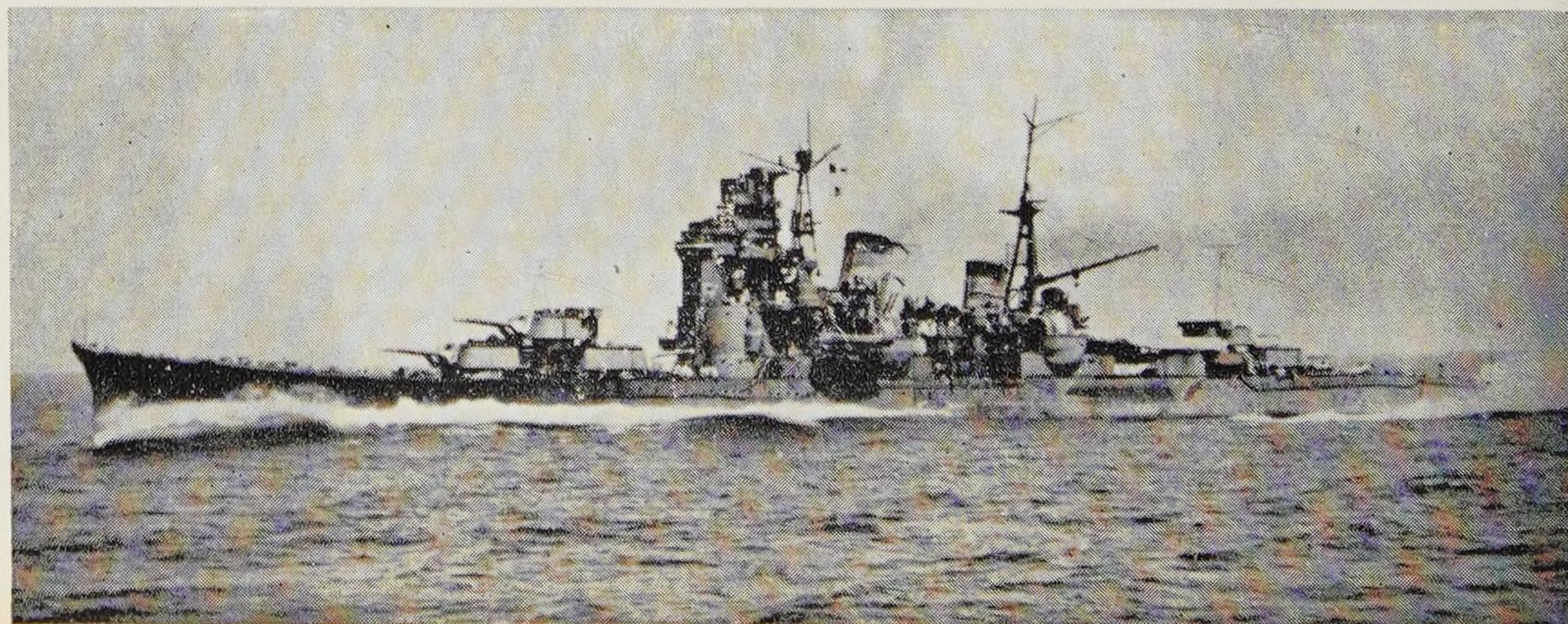
Dimensions :	Length : 661.12 ft.-201.50 m. (w.l.)	Draught : 19.36 ft.-5.90 m. (mean)
Armament :	Beam : 56.89 ft.-17.34 m. (f.l.)	Torpedo Tubes : 12-24 in.
	Guns : 10-8 in., 6-4.7 in. AA.	
	Planes : 2 Catapults : 1	
Machinery :	Kanpon Turbines S.H.P.: 130,000	Speed : 35.5 kts.
Displacement :	13,380 T. (WS), 14,980 t, (WT)	
Dimensions :	Length : 661.78 ft.-201.70 m. (w.l.)	
	Beam : 68.02 ft.-20.73 m. (f.l.)	Draught : 20.74 ft.-6.32 m. (mean)
Armament :	Guns : 10-8 in., 8-5 in. AA., 8-25 mm. AA., 4-12.7 mm. AA.	Torpedo Tubes :
	16-24 in. Planes : 3 Catapults : 2	
Machinery :	Kanpon Turbines S.H.P.: 130,250	Speed : 33.8 kts.
Data :	1) At completion. (HAGURO), 2) At conversion. (MYOKO)	

NACHI

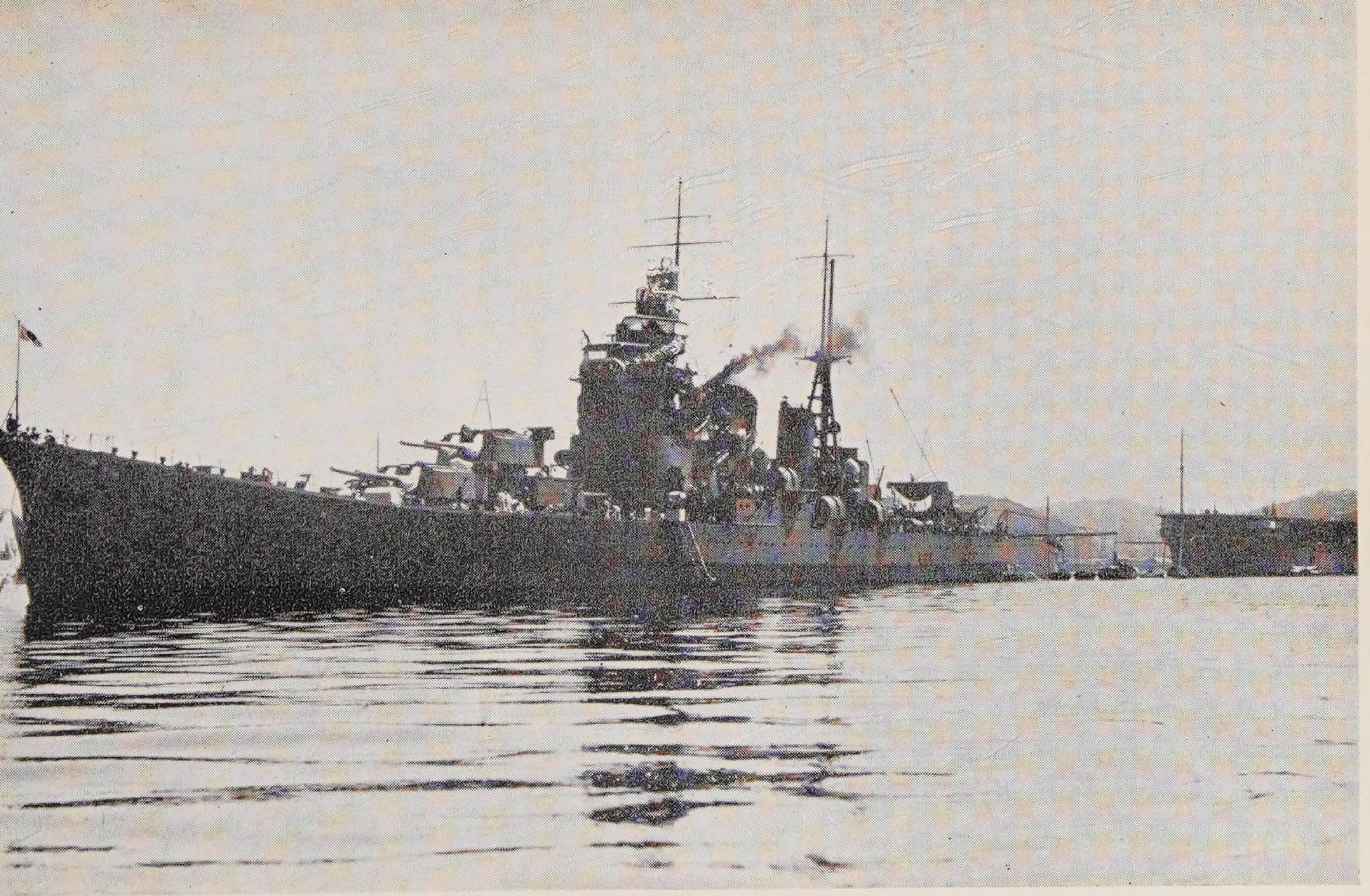
The heavy cruiser *NACHI* at Yokosuka in December 1928. In the right background is seen part of the carrier *HOSHO*. The *NACHI* was the first ship to be completed of the *Myoko* Class. Like the *FURUTAKA*, displacement of the *NACHI* was greater than originally envisaged.

MYOKO (2)

The *MYOKO* at the official full speed trial run in March 1941 following the second conversion.



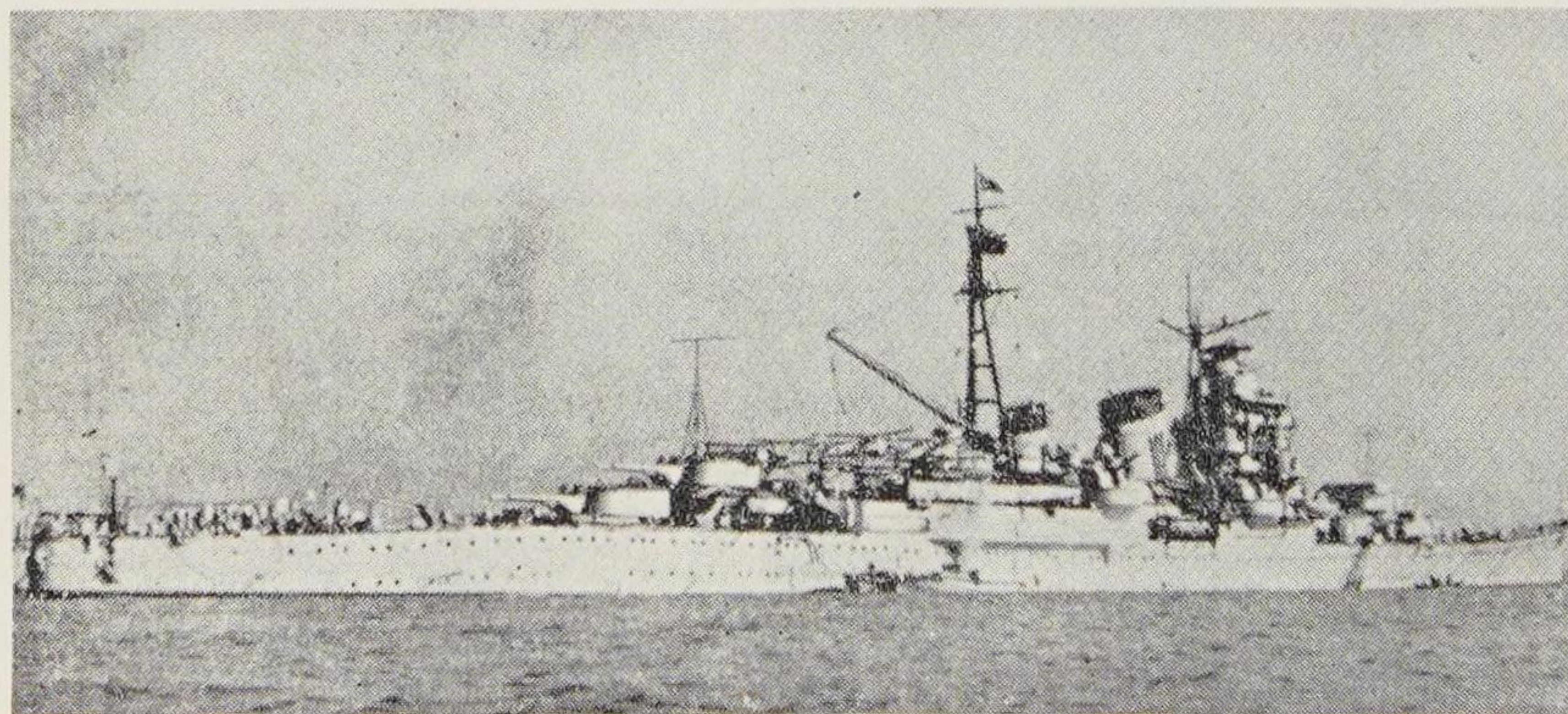
CA NACHI.



CA NACHI.

ASHIGARA (1)

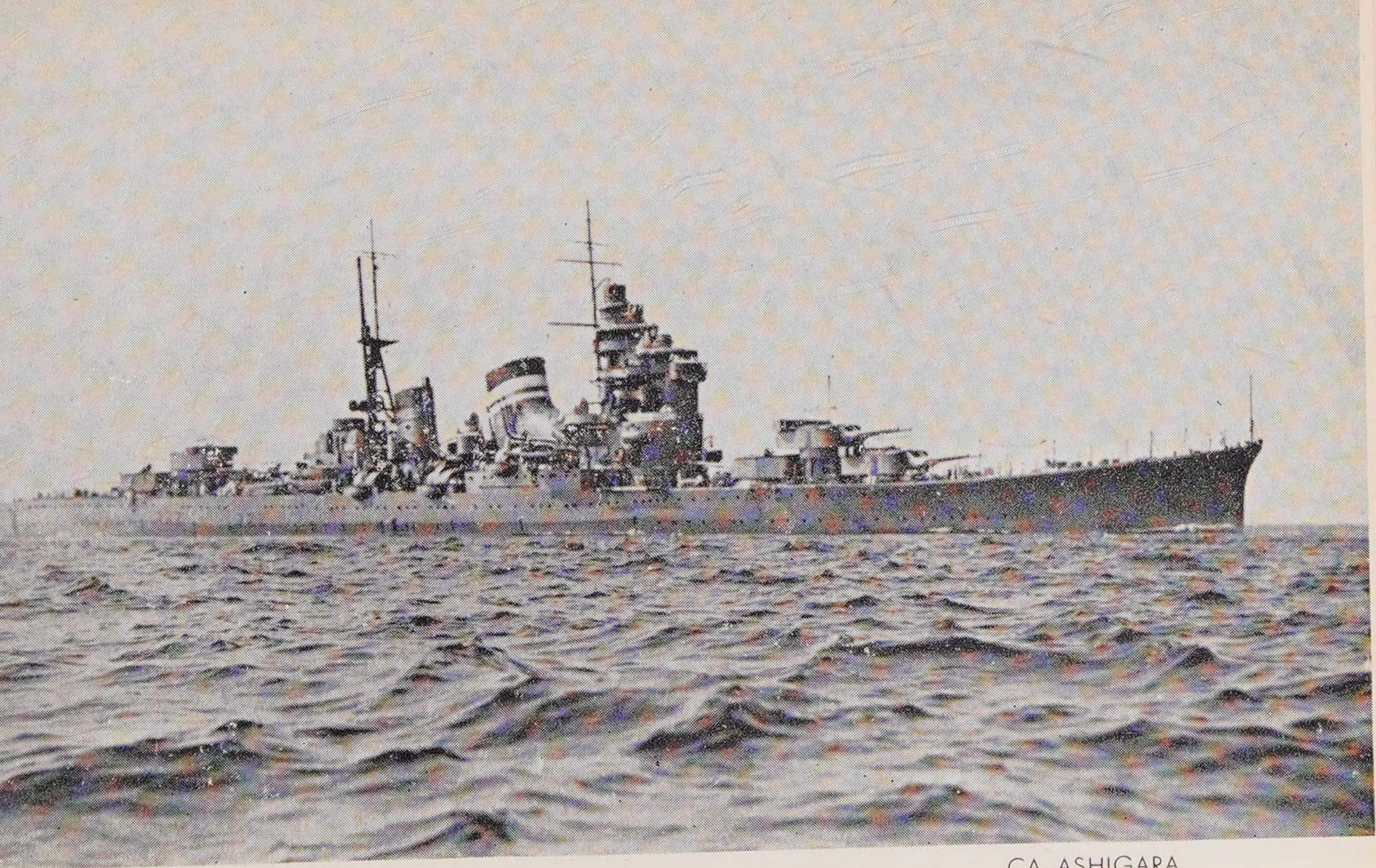
The heavy cruiser *ASHIGARA* in December 1940 after the second conversion. Note the foremast which is a light tripod mast. In 1942, the *ASHIGARA* took part in the operation against the Dutch East Indies as the flagship of the Third Fleet.



CA ASHIGARA.

ASHIGARA (2)

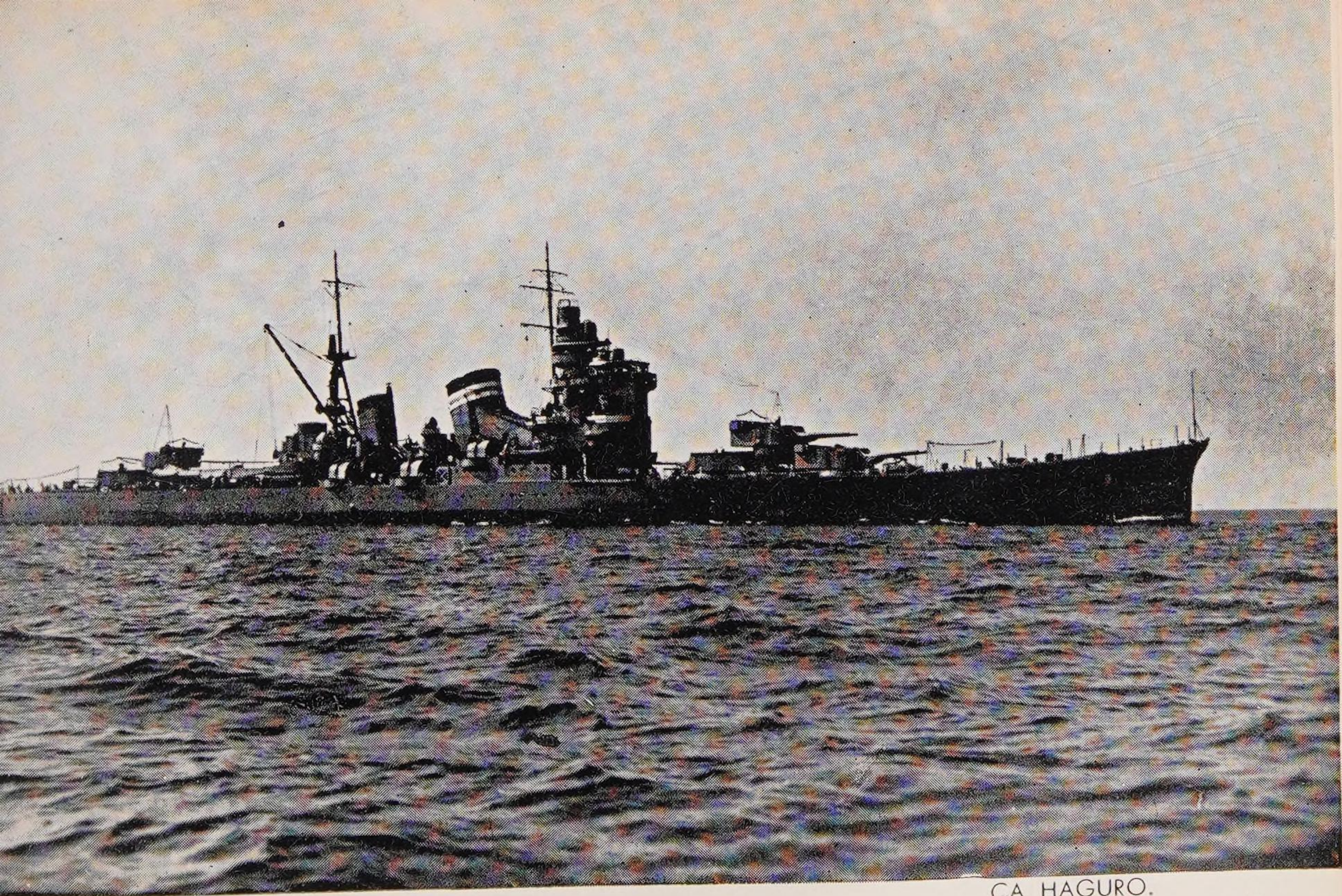
The *ASHIGARA* in 1932. Note differences from the picture on Page 92 in the upper bridge structure, fore and main masts, anti-aircraft armament, the derricks, etc.



CA ASHIGARA.

HAGURO

The heavy cruiser *HAGURO* in 1932. The Washington Naval Treaty ignited the race among the U.S., Britain, France, Italy, Spain and Japan, in which they completed to construct the best heavy cruiser within the limitations of 10,000-tonnage and the 8-in. main armament. The *Myoko* Class cruisers, the *HAGURO* being the last to be completed, had two more 8-in. guns and a better speed of 35 kt. compared with the 10,000-ton counterparts of the U.S. and Britain.



CA HAGURO.

TAKAO Class

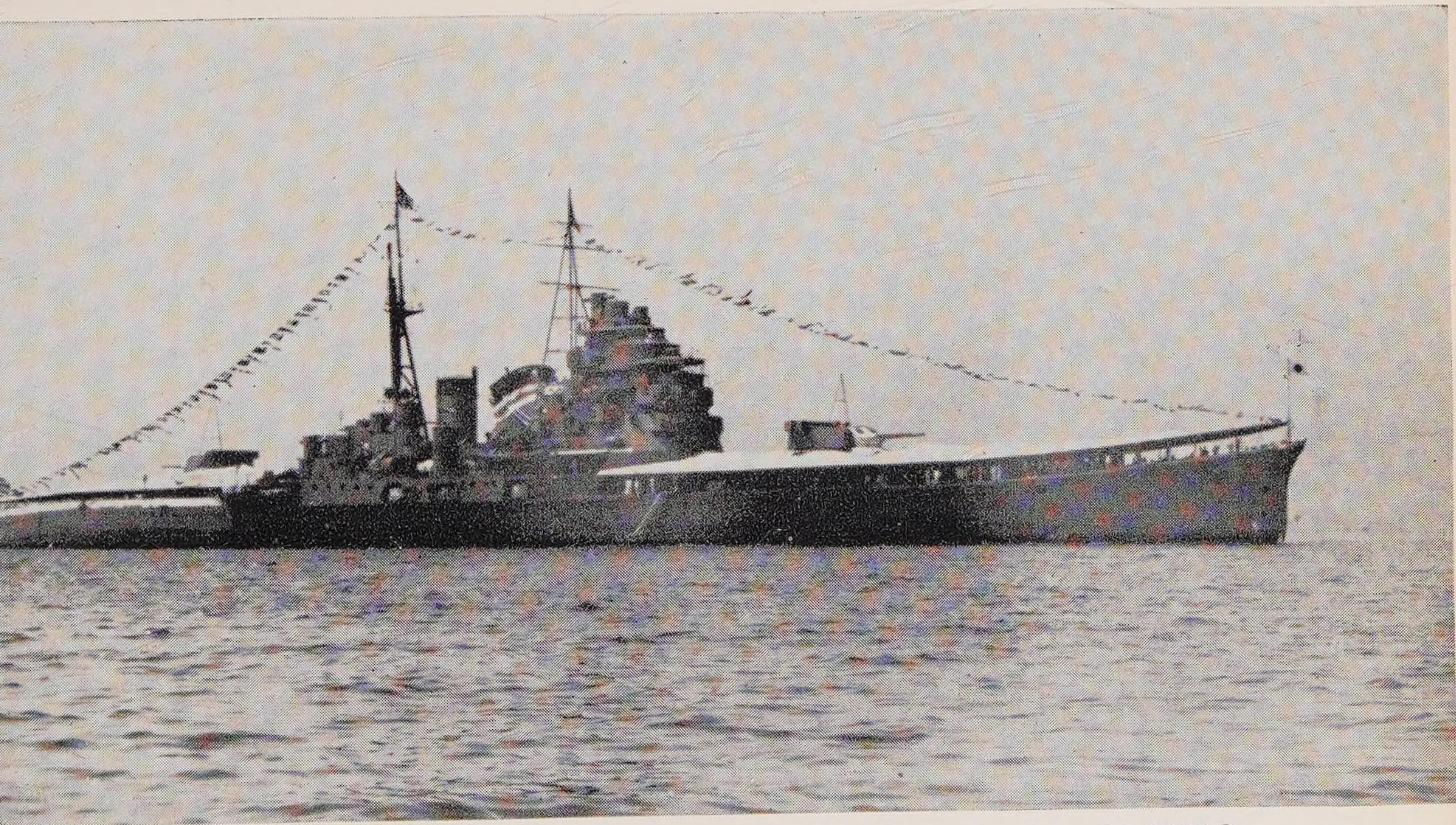
Name	Completed	Converted	Fate
TAKAO	31-5-32 Yokohama	31-8-39	Lost 21-10-46, Malacca Strait, British Navy
ATAGO	30-3-32 Kure	10-39	Lost 23-10-44, Battle for Leyte Gulf, U.S. submarine
MAYA	30-6-32 Kawasaki	3-44	Lost 23-10-44, Battle for Leyte Gulf, U.S. submarine
CHOKAI	30-6-32 Nagasaki		Lost 25-10-44, Battle for Leyte Gulf, U.S. planes

Project: Reinforcement Programme, 1927

History: Improvement of the *Myoko* Class, the cruiser of the *Takao* Class featured the huge, castle-like bridge structure. The *MAYA* in 1944 came to possess the heaviest anti-aircraft armament among the Japanese heavy cruisers with removal of one 20 cm. main gun turret for the total of 12-12.7-cm. (5 in.) AA. guns and a good number of machine guns. During the war, the *Takao* Class comprised the Fourth Cruiser Division and saw active service until all but the *TAKAO* were sunk in the Battle for Leyte Gulf. The *CHOKAI* will be remembered as the flagship of Admiral Mikawa's Eighth Fleet which scored an overwhelming victory in the Battle of Savo.

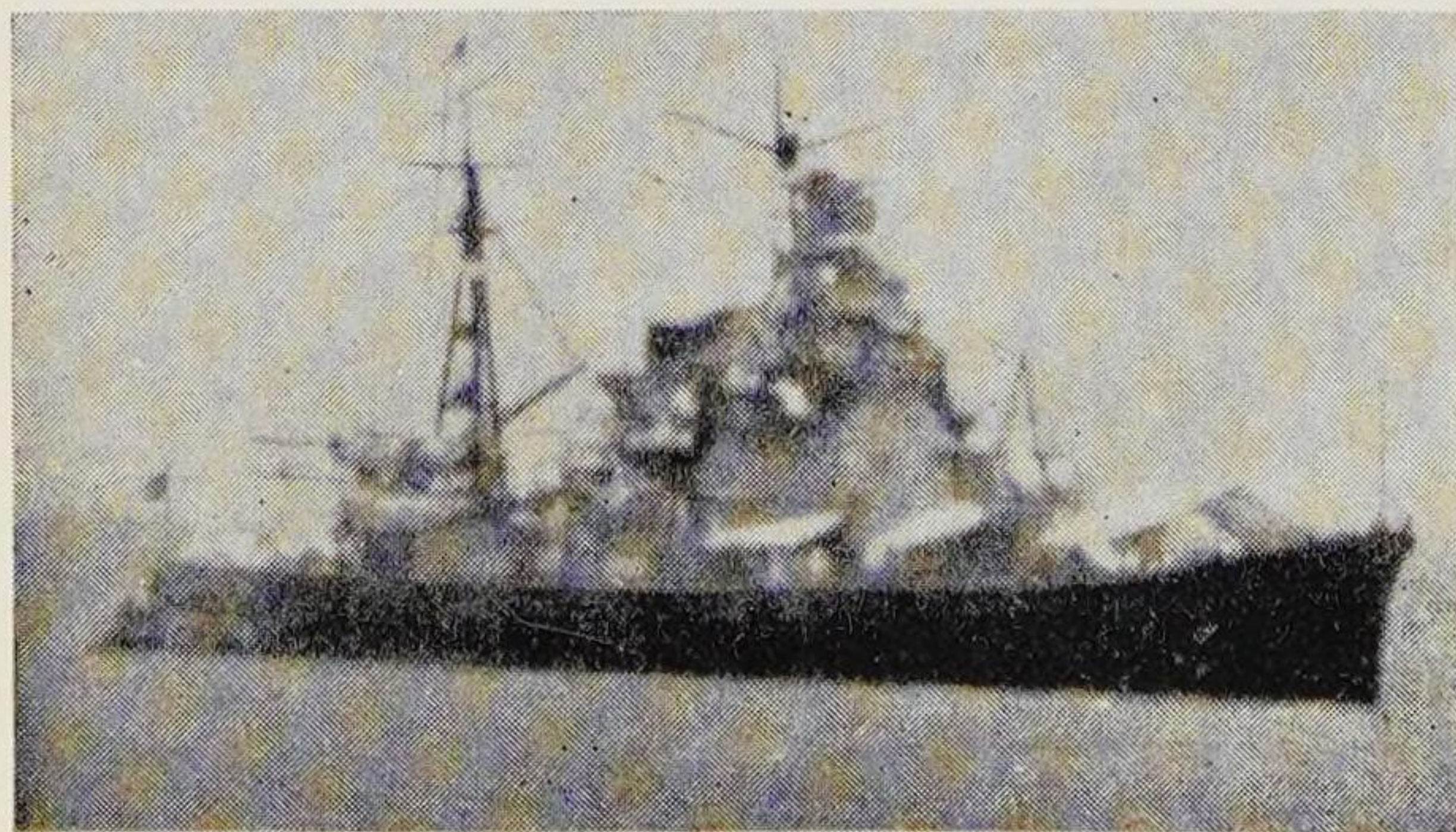
Comparable ships: *Northampton* (U.S.), *Portland* (U.S.), *Dorsetshire* (Br.), *Algérie* (Fr.), *Zala* (It.).

The heavy cruiser *TAKAO* dressed for the Naval Review of 1923. →



CA TAKAO.

Displacement :	11,350 T. (WS), 12,986 t. (WT).		
Dimensions :	Length : 661.58 ft.-201.67 m. (w.l.),		
	Beam : 59.16 ft.-18.03 m. (f.l.)	Draught : 20.05 ft.-6.11 m. (mean)	
Armament :	Guns : 10-8 in., 4-4.7 in. AA.	Torpedo Tubes : 8-24 in.	
	Planes : 2	Catapults : 2	
Machinery :	Kanpon Turbines	S.H.P. : 130,000	Speed : 35.5 kts.
Displacement :	13,160 T. (WS), 14,989 t. (WT)		
Dimensions :	Length : 661.78 ft.-201.70 m. (w.l.),		
	Beam : 68.02 ft.-20.73 m. (f.l.)	Draught : 20.74 ft.-6.32 m. (mean)	
Armament :	Guns : 10-8 in. AA. 8-25 mm. AA. 4-12.7 mm. AA.		
	Torpedo Tubes : 16-24 in.	Planes : 3	Catapults : 2
Machinery :	Kanpon Turbines	S.H.P. : 133,100	Speed : 34.25 kts



ATAGO (1)

The heavy cruiser *ATAGO* shortly after completion in 1932. While the *TAKAO* had the torpedo tubes on the twin deck, the *ATAGO* had four twin tubes on the upper deck, two on each side. Rate of fire of the tubes was approximately three minutes. The main gun of the *ATAGO* had the maximum elevation of 70 degrees for anti-aircraft barrage. Thus the *ATAGO* was equipped with two fewer anti-aircraft guns than the *Myoko* Class.

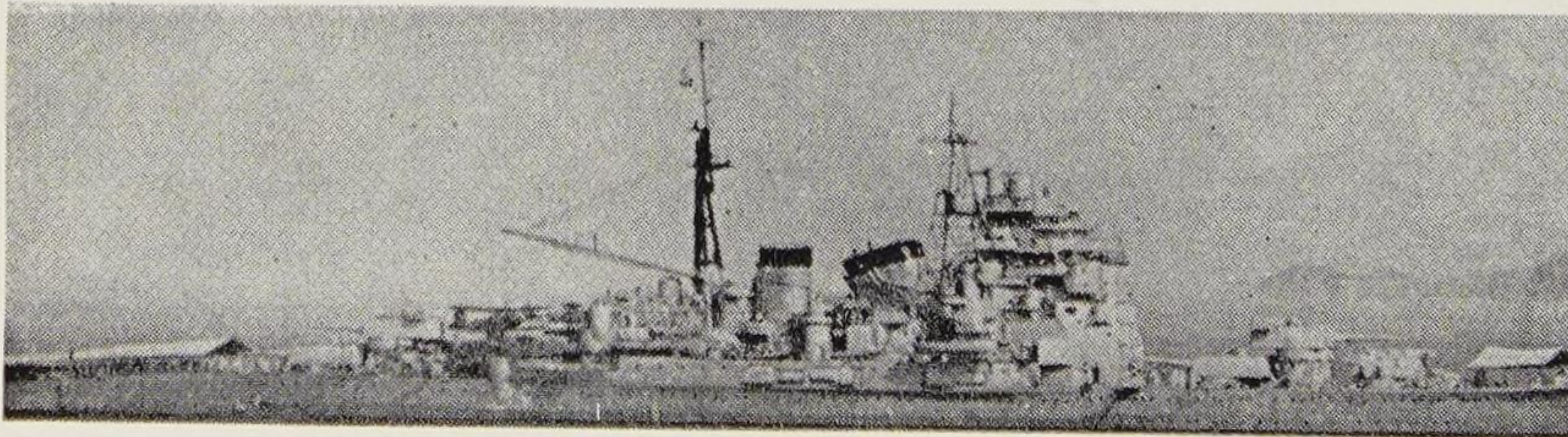
ATAGO (2)

The heavy cruiser *ATAGO* in 1941, shortly before the war.

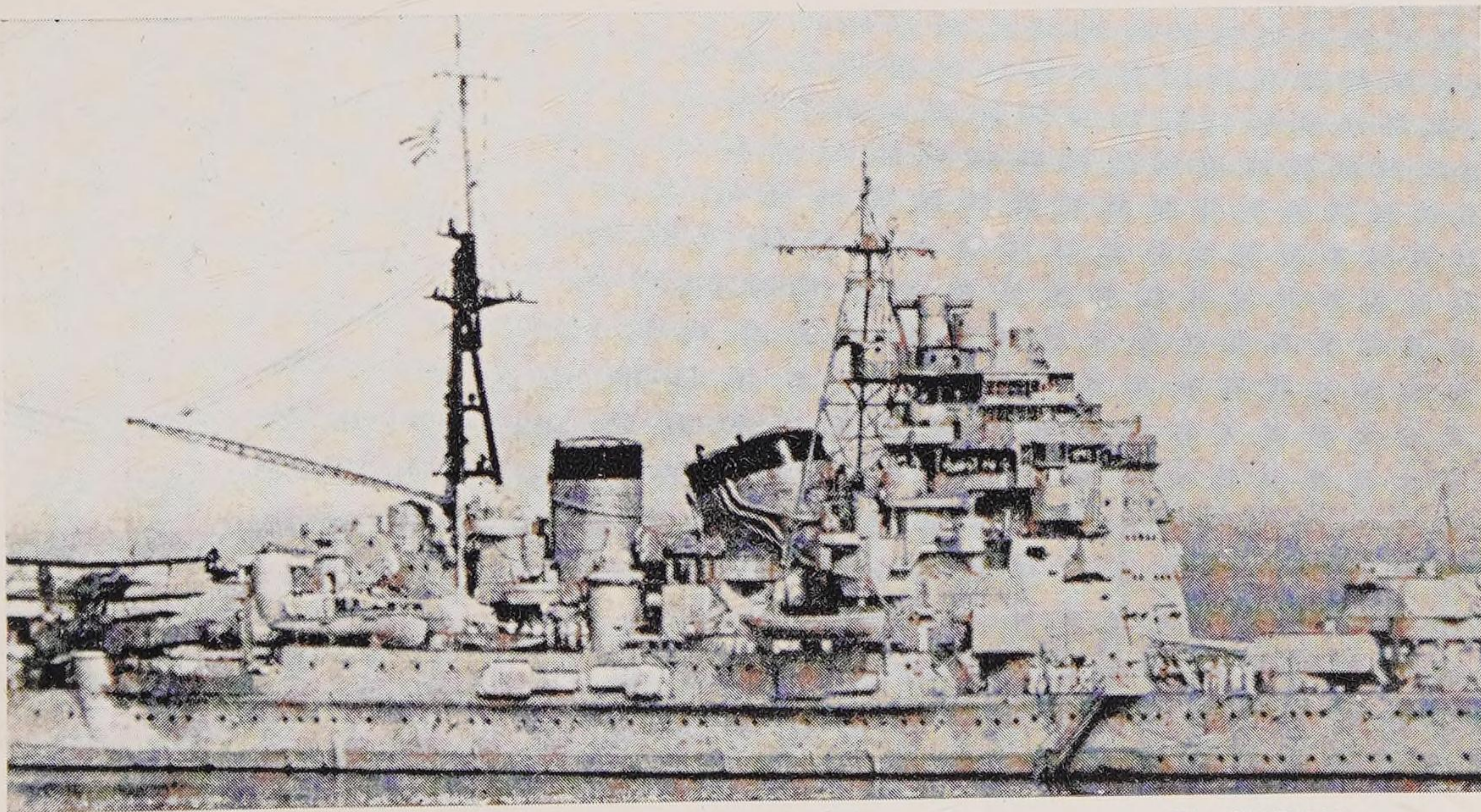


CHOKAI (1)

The heavy cruiser *CHOKAI* as seen from a British ship at Amoy in June 1940. Under the derrick are seen Type 94 and Type 95 float reconnaissance planes. The Type 94 plane was used mainly for reconnaissance while the Type 95 single-float was used for spotter. In a few years these types were replaced by Type 0 three-seat reconnaissance monoplane and Type 0 single-float spotter biplane.



CA CHOKAI.



CA CHOKAI.

MOGAMI Class

Name	Completed	Converted	Fate
MOGAMI	28-7-35	1) 12-39	Lost 25-10-44, Battle for Leyte Gulf, U.S. planes
	Kure	2) 30-4-43	
MIKUMA	29-8-35	30-12-39	Lost 6-6-42, Battle for Midway, U.S. planes
	Nagasaki		
SUZUYA	31-10-37	30-12-39	Lost 25-10-44, Battle for Leyte Gulf, U.S. planes
	Yokosuka		
KUMANO	31-10-37	30-12-39	Lost 25-11-44, at Colon Bay, U.S. planes
	Kawasaki		

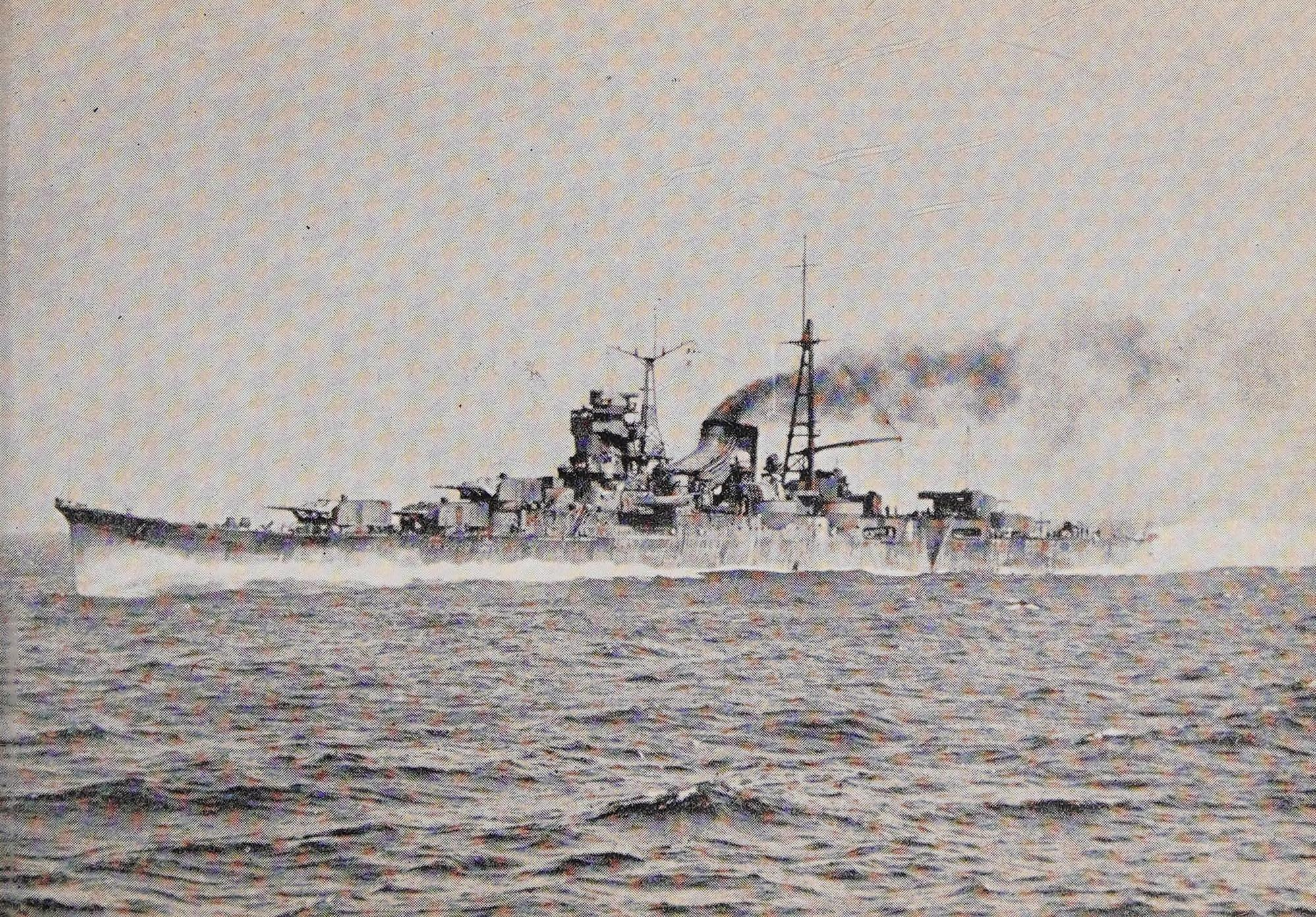
Project: First Reinforcement Programme under London Naval Treaty, 1931.

History: Due to restrictions brought about by the London Naval Treaty, the *Mogami* Class was conceived as the large light cruisers carrying fifteen 15.5-cm. (6.1-in.) guns in five triple turrets, which would be good matches for the 8-in. guns of the 10,000-ton heavy cruisers. The *Mogami* Class, the first Japanese warships to equip triple turrets, was named after the famous rivers in Japan, being the light cruiser at birth. In 1939, however, all the four ships of the *Mogami* Class were converted to equip ten 20-cm. main guns in lieu of 15.5-cm. guns to become heavy cruisers. The *Mogami* Class comprised the Seventh Cruiser Division and engaged in major battles.

The *MIKUMA* put up a heroic battle to save the damaged *MOGAMI* in the battle of Midway in 1942 to become the first Japanese heavy cruiser to be lost in the Pacific War. The *MOGAMI*, through repair and reconstruction, became the carrier-cruiser, carrying 11 float reconnaissance planes on the flight deck which replaced the Nos. 4 and 5 turrets.

The heavy cruiser *MOGAMI* at 36 kts. full speed in 1935. →

CA MOGAMI.



Comparable ships: As light cruiser, *Brooklyn* (U.S.), *Southampton* (Br.) As heavy cruiser, *New Orleans* (U.S.), *Algérie* (Fr.), *Admiral Hipper* (Gr.)

Displacement: 11,200 T. (WS)

Dimensions: Length: 649.83 ft.-198.06 m. (w.l.)

Beam: 63.00 ft.-19.20 m. (f.l.) Draught: 19.36 ft.-5.90 m. (mean)

Armament: Guns: 15-6.1 in. 8-5 in. AA. Torpedo Tubes: 12-24 in.

Planes: 3 Catapults: 2

Machinery: Kanpon Turbines S.H.P.: 152,000 Speed: 35.9 kts.

Displacement: 12,400 T. (WS), 13,887 t. (WT)

Dimensions: Length: 649.83 ft.-198.06 m. (w.l.)

Beam: 66.28 ft.-20.20 m. (f.l.) Draught: 19.36 ft.-5.90 m. (mean)

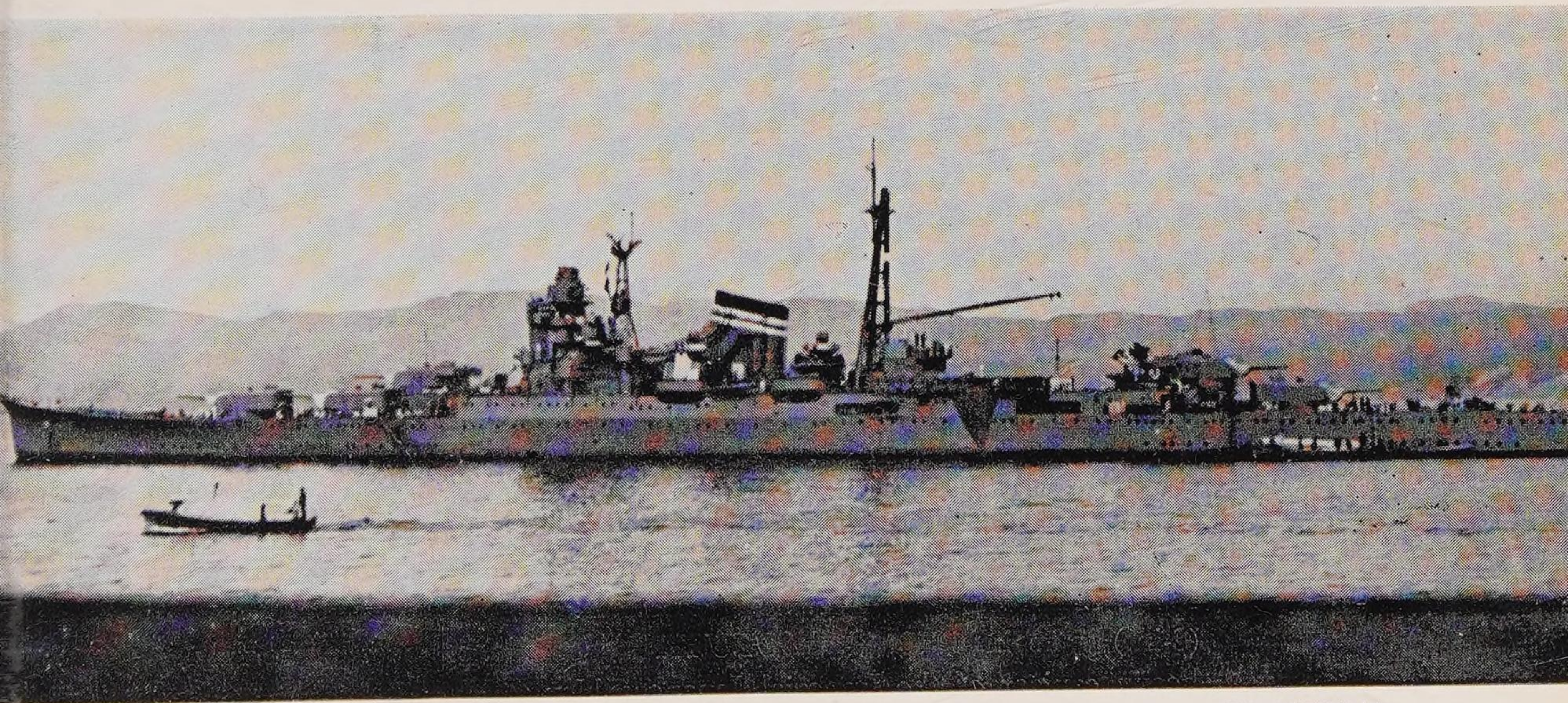
Armament: Guns: 10-8 in. 8-5 in. AA. 8-25 mm. AA. 4-12.7 mm. AA. Torpedo Tubes: 12-24 in.

Planes: 3 Catapults: 2

Machinery: Kanpon Turbines S.H.P.: 152,000 Speed: 34.7 kts.

MIKUMA

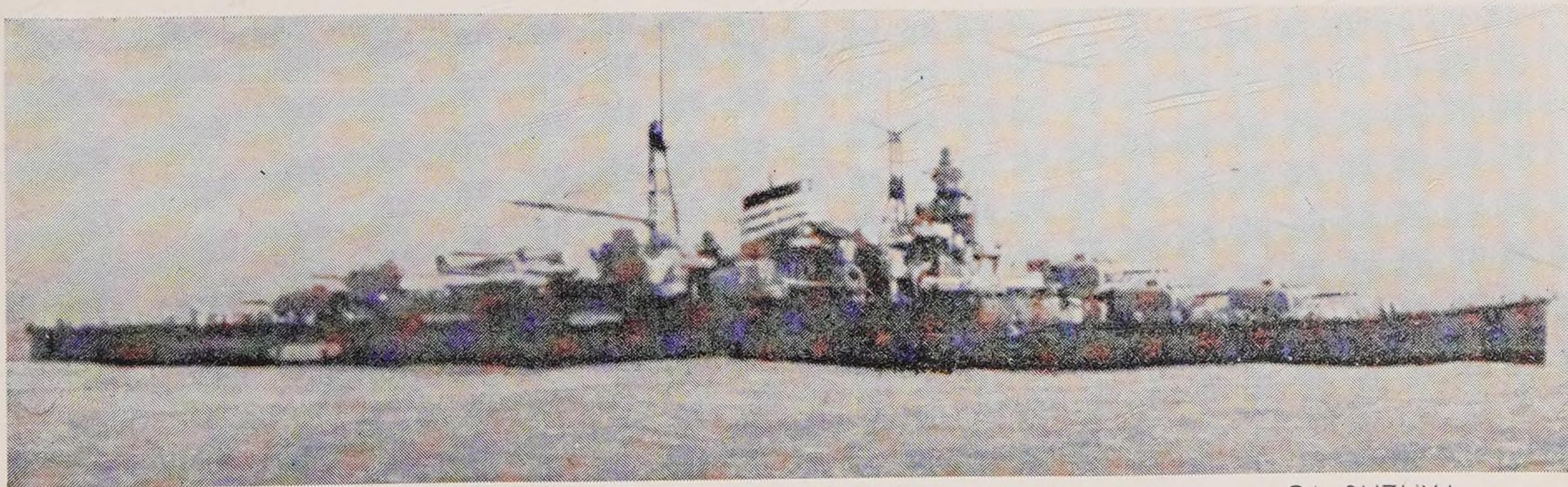
The heavy cruiser *MIKUMA* at Hakodate in September 1935. Note the arrangement of the fore turrets which differs from that of the *Takao* Class, which gives a wider field of fire to the No.3 turret. On each side of the ship are two triple torpedo tube banks. Anti-aircraft armament of this class was heavier than that of 10,000-ton class cruisers, having eight 12.7-cm. (5 in.) guns in four twin turrets. The two white stripes around the funnel denotes the second ship of the Seventh Cruiser Division. The ship is seen carrying a type 90 Model 3 float reconnaissance biplane.



CA MIKUMA.

SUZUYA

The heavy cruiser *SUZUYA* off Amoy on 19th December 1938. As the white stripes denote, the ship was the third ship of the Seventh Cruiser Division. On the catapults may be seen Type 94 and Type 95 float-planes. The *SUZUYA* was improved in the course of its construction, overcoming various shortcomings found after completion of the *MOGAMI*. Equipped with 20-cm. (8-in.) guns in 1940, the *SUZUYA* become the most powerful heavy cruiser of the Imperial Japanese Navy.



CA SUZUYA.

TONE Class

Name	Completed	Fate
TONE	20-11-38 Nagasaki	Scrapped after war
CHIKUMA	20-5-39 Nagasaki	Lost 25-10-44, Battle for Leyte Gulf, U.S. Planes

Project: Second Reinforcement Programme, 1934

History: Improvement of *Mogami* Class, the *Tone* Class was originally designed to be light cruisers with 15.5-cm. (6.1-in) guns. During construction, however, the naval treaty expired and the *TONE* and *CHIKUMA* finally emerged as heavy cruisers with eight 20-cm. (8-in.) main guns. All the main guns in four twin turrets were concentrated on the fore deck, the similar arrangement being adopted in the battleships *Nelson* (Br.) and *Dunkerque* (Fr.). On the spacious aft deck, the *Tone* Class carried five float reconnaissance planes. During the Pacific War, the *TONE* and *CHIKUMA* comprised the Eighth Cruiser Division and operated with carrier task forces.

Comparable Ships: *Witchita* (U.S.), *Admiral Hipper* (Gr.)

Displacement: 11,900 T. (WS), 14,070 t. (WT)

Dimensions: Length: 661.45 ft.-201.60 m. (o.a.), 649.64 ft.-198.00 m. (w.l.)
Beam: 60.68 ft.-18.50 m. (f.l.) Draught: 20.44 ft.-6.23 m. (mean)

Armament: Guns: 8-8 in. 8-5 in. AA. 8-25 mm. AA. 4-12.7 mm.
Torpedo Tubes: 12-24 in. Planes: 6 Catapults: 2

Machinery: Kanpon Turbines S.H.P.: 152,200 Speed: 35.0 kts.

The heavy cruiser *TONE* as seen from the *CHIKUMA* during the naval manoeuvres of 1940.

CA TONE.



LIGHT CRUISERS

TENRYU Class

Name	Completed	Fate
TENRYU	20-11-19 Yokosuka	Lost 18-12-42, in Bismarck Sea, U.S. submarine
TATSUTA	31-3-19 Sasebo	Lost 13-3-44, off Hachijojima, U.S. submarine

Project: New ship building programme of 1916

History: The *Tenryu* Class was the first modern light cruiser of the Imperial Japanese Navy, built to cope with appearance of the *Aurora* Class of Britain. They were also the first Japanese warships to equip torpedo tubes in the triple mounts. Until completion of the 5,500-ton light cruisers, they were used as the flagships of the destroyer squadrons. The obsolete cruisers comprised the 18th Squadron during the Pacific War. The *TENRYU* took part in the Battle of Savo.

Comparable Ships: *Aurora* and *C* Classes (Br.)

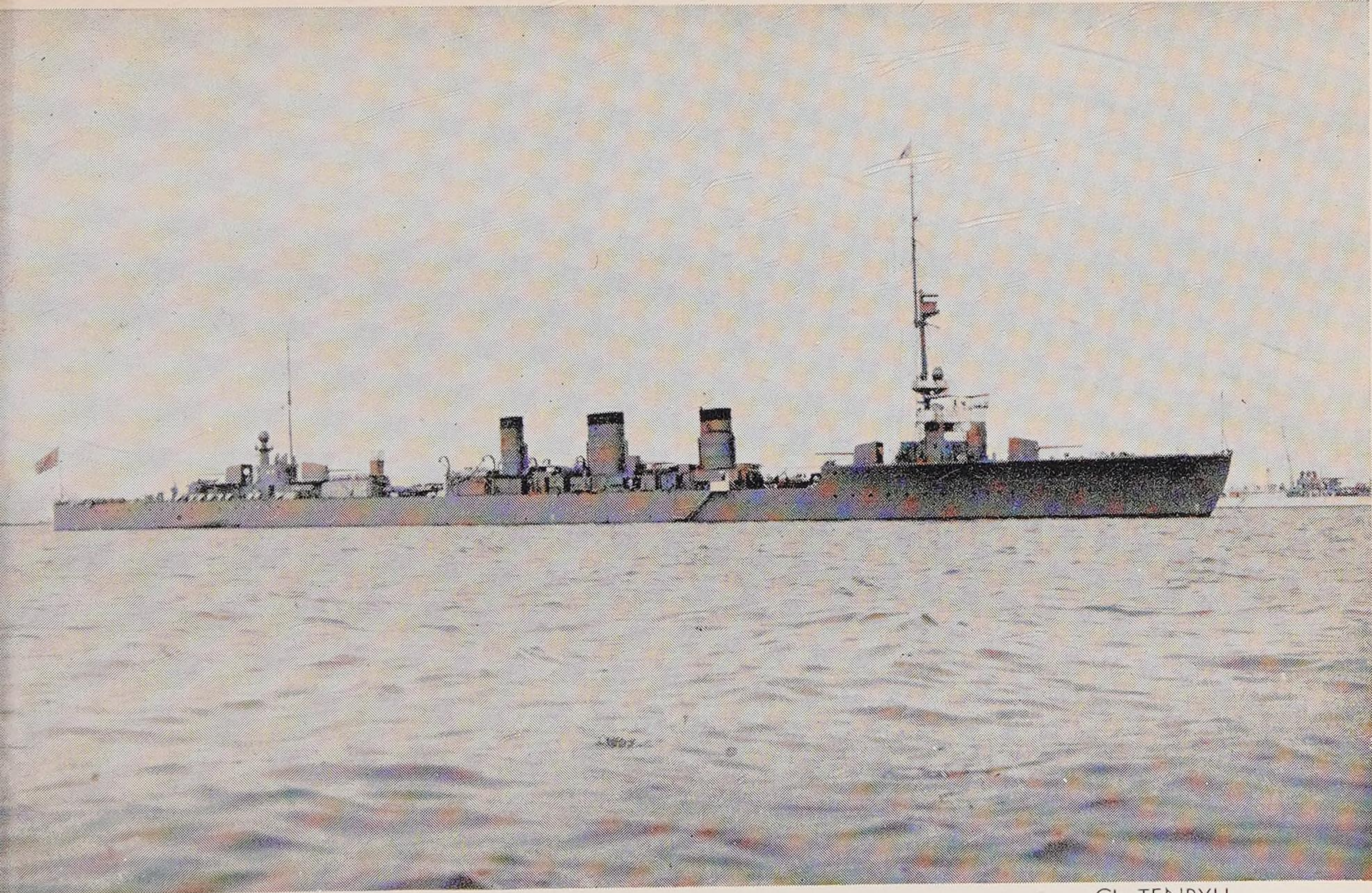
Displacement: 3,230 T. (WS), 3,948 t. (WN)

Dimensions: Length: 457.90 ft.-139.56 m. (w.l.) Beam: 40.49 ft.-12.34 m.
(f.l.) Draught: 12.99 ft.-3.96 m. (mean)

Armament: Guns: 4-5.5 in. Torpedo Tubes: 6-21 in.

Machinery: Curtis Turbines S.H.P.: 51,000 Speed: 33.0 kts.

The light cruiser *TENRYU* at Yokohama on 12th April 1922.

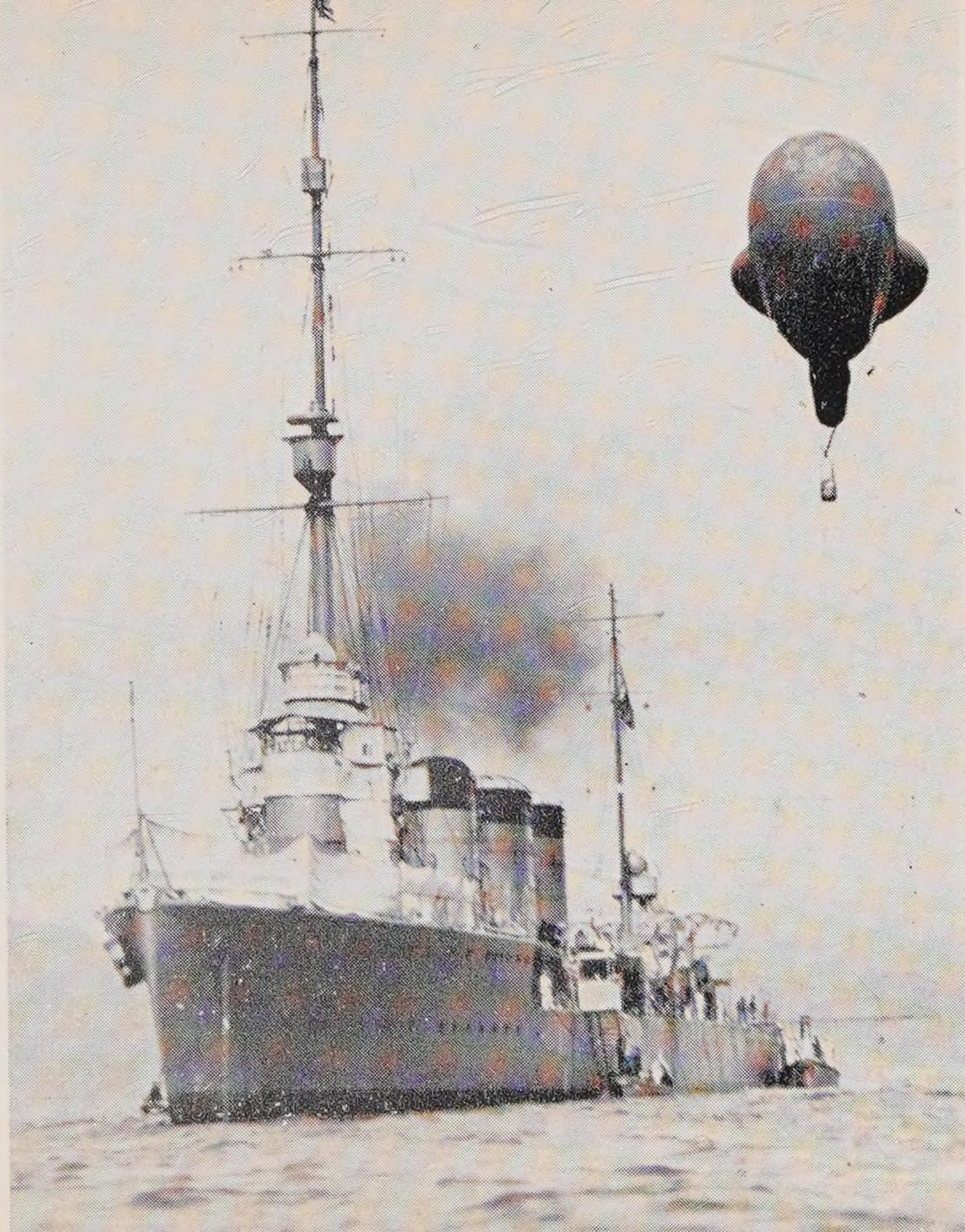


CL TENRYU.

TATSUTA

The light cruiser *TATSUTA* as the flagship of the First Destroyer Squadron in 1927.

CL TATSUTA.



KUMA Class

Name	Completed	Converted	Fate
KUMA	31-8-20 Sasebo	1934	Lost 11-1-44, off Penang, British submarine
TAMA	29-1-21 Nagasaki	1) 1934 2) 1944	Lost 25-10-44, Battle for Leyte Gulf, U.S. submarine
KITAKAMI	15-4-21 Sasebo	1) 12-41 2) 1-45	Scrapped after war
OOI	3-10-21 Kawasaki	9-41	Lost 19-7-44, in South China Sea, U.S. submarine
KISO	4-5-21 Nagasaki		Lost 13-11-44, off Manila, U.S. Planes

Project: 8-4 Fleet project of 1917

History: The *Kuma* Class was the first of the 5,500-ton series of light cruisers, developed from the *Tenryu* Class. Remained in active service until all but the *KITAKAMI* were sunk in action. The *OOI* and *KITAKAMI* were converted into the mother ship of the Kaiten human torpedoes in 1945. The *TAMA* and *KISO* belonged to the Fifth Fleet which operated for the defence of the Northern Pacific.

Comparable Ships: *D* Class (Br.)

Displacement: 5,100 T. (WS), 5,500 T. (WN)

Dimensions: Length: 520.12 ft.-158.53 m. (W.L.) Beam: 46.49 ft.-14.17 m. (f.l.)
Draught: 15.75 ft.-4.80 m. (mean)

Armament: Guns: 7-5.5 in. Torpedo Tubes: 8-21 in. Planes: 1 Catapults: 1

Machinery: Gihon Turbines S.H.P.: 90,000 Speed: 36.0 kts

The light cruiser *KUMA* at Tateyama in March 1924.



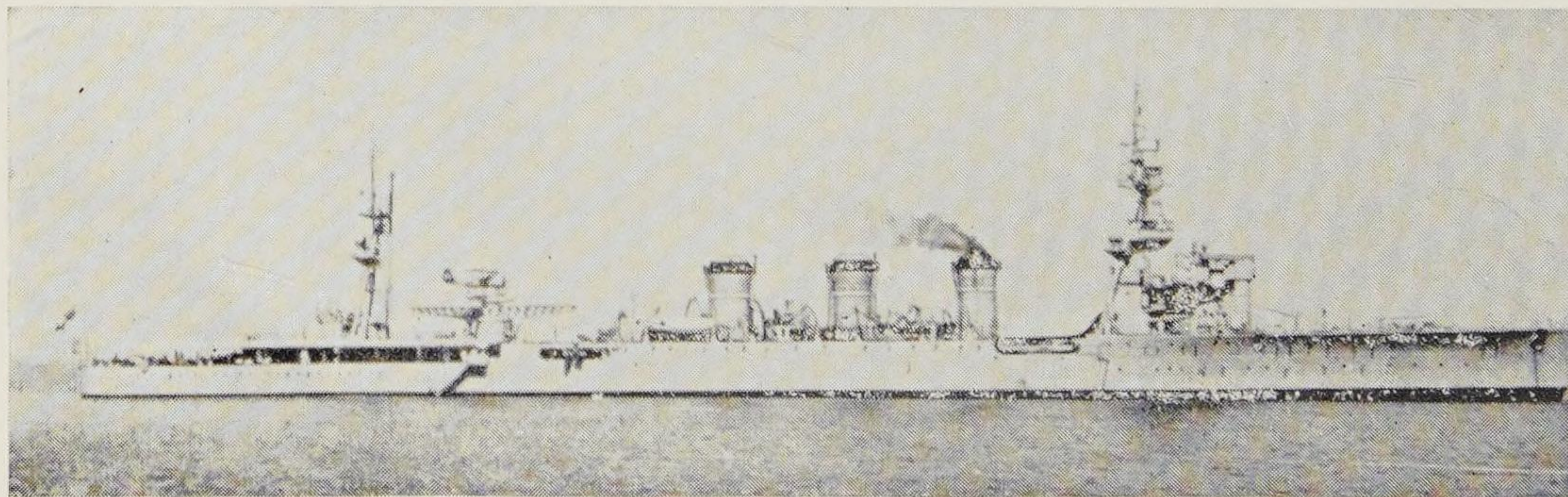
CL KUMA.

After conversion as torpedo ship (KITAKAMI)
Displacement : 5,870 T. (WS)
Armament : Guns: 4-5.5 in. Torpedo Tubes: 40-24 in.
Machinery : Gihon Turbines S.H.P.: 90,000 Speed: 31.4 kts.

The light cruiser *TAMA* entering Yokosuka harbour in the summer of 1934. The bridge is sheltered by canvas.→

KUMA (2)

The light cruiser *KUMA* in June 1935 was the flagship of the Fifth Fleet. On the catapult is a Type 90 Model 2-2 floatplane.



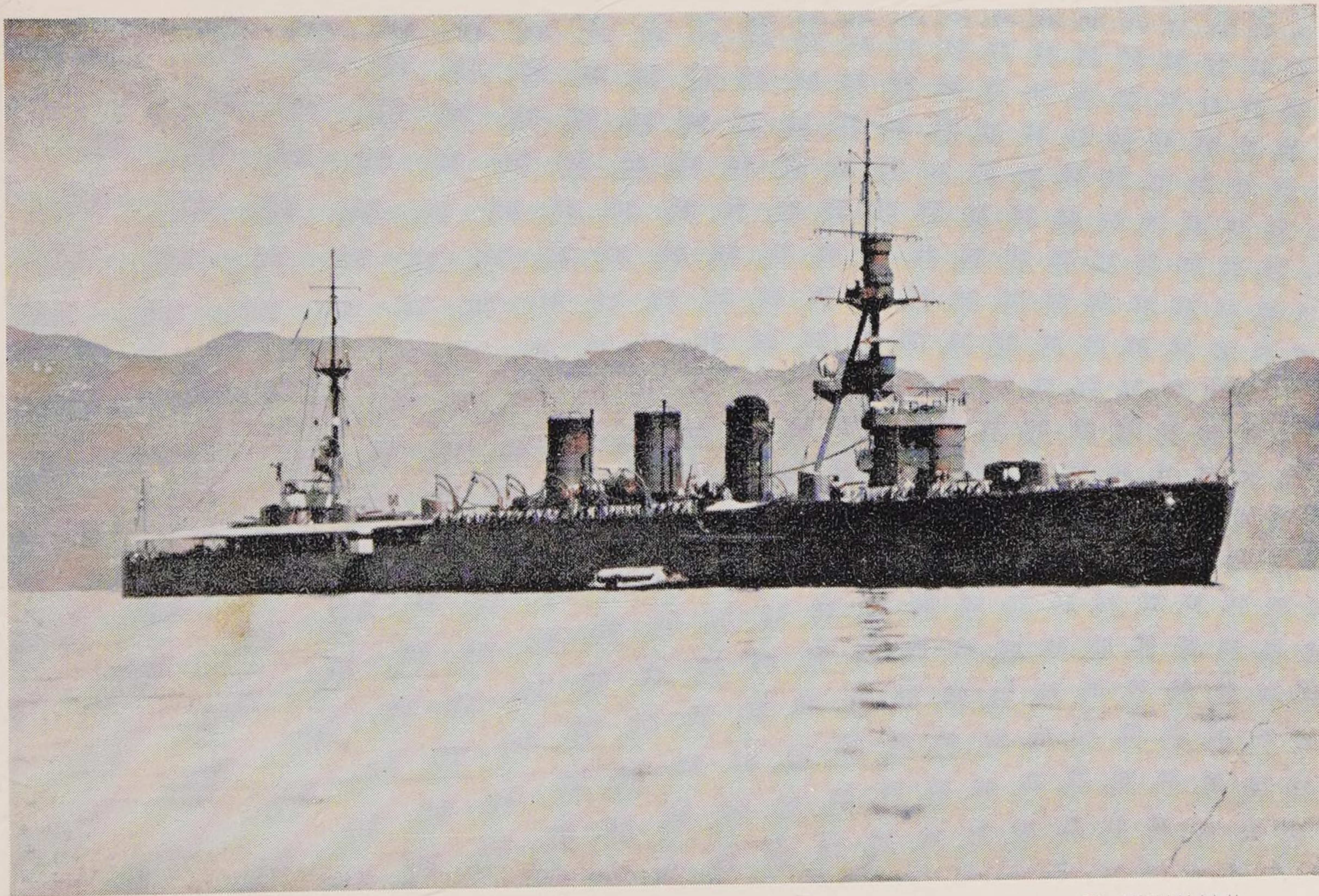
CL KUMA.



CL TAMA.

KITAKAMI

The light cruiser *KITAKAMI* in late 1920s. In renovation work of 1934 the No. 1 funnel of the *KITAKAMI* was a little extended, which distinguished it from her sister ships.



CL KITAKAMI.

NAGARA Class

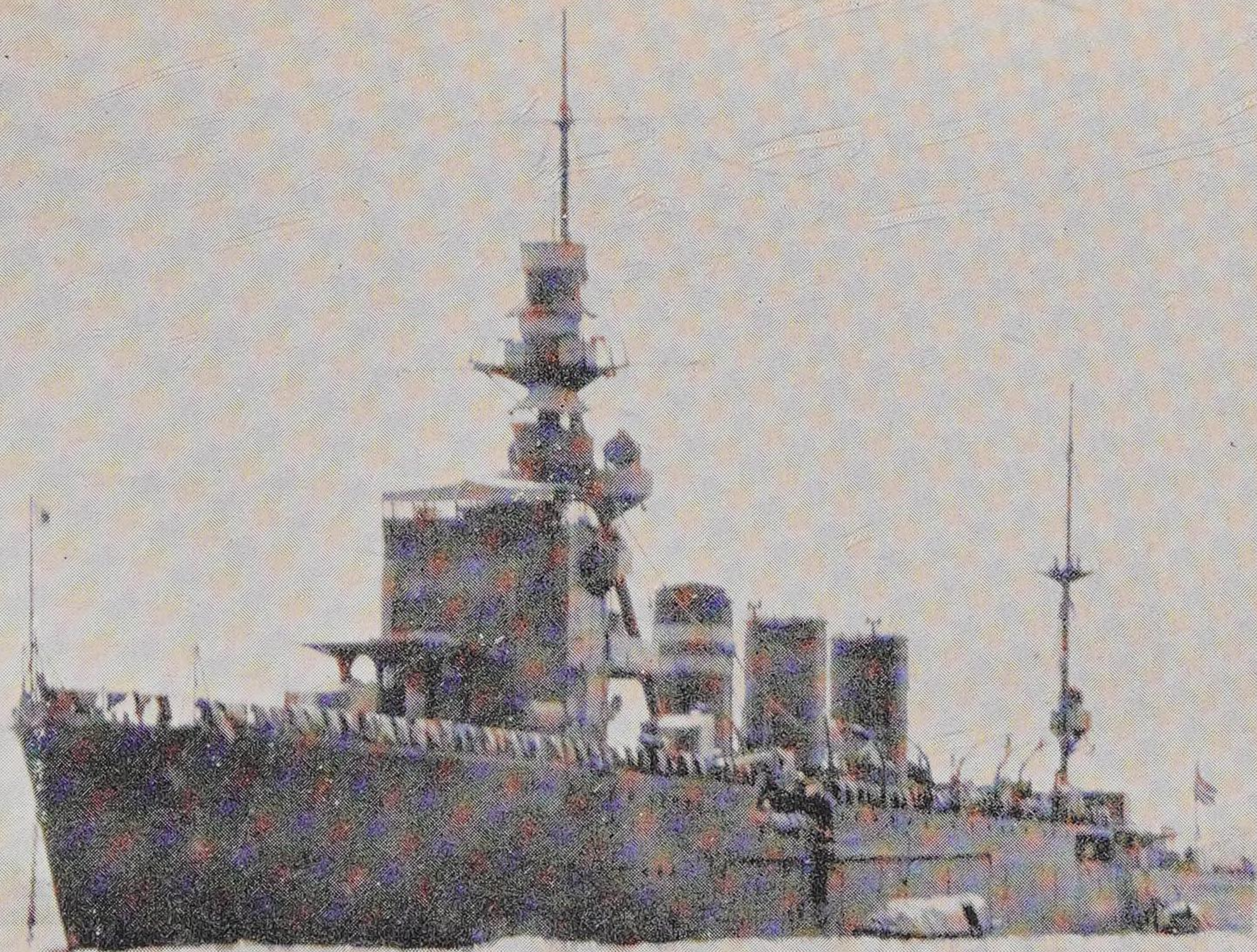
Name	Completed	Converted	Fate
NAGARA	21-4-22 Sasebo	1934	Lost 7-8-44, south of Kyushu, U.S. submarine
ISUZU	15-8-23 Uraga	1) 1934 2) 1944	Lost 7-4-45, off Sunbawa, U.S. submarine
NATORI	15-9-22 Nagasaki	1934	Lost 18-8-44, off Samar. U.S. submarine
YURA	20-3-23 Sasebo	1934	Lost 25-10-42, off Santa Isabel, U.S. planes
KINU	10-11-22 Kawasaki	1934	Lost 26-10-44, off Masbate, U.S. submarine
ABUKUMA	26-5-25 Uraga	1934	Lost 25-10-44, Battle for Leyte Gulf, U.S. planes

Project: 8-4 Fleet - 8-8 Fleet Programme (1917-20)

History: Improvement of the *Kuma* Class, the *Nagara* Class was similar in silhouette but differed greatly in that the *Nagara* Class for the first time was equipped with 61-cm. torpedo tubes. The *Nagara* Class cruisers were actually used in the war as flagships of cruiser, destroyer and submarine squadrons. Through renovation in 1934, the tripod main-mast, the derrick and the catapults were installed. The *Isuzu* was converted in 1944 into the anti-aircraft cruiser.

Comparable Ships: *D* and *C* Class (Br.), *Omaha* (U.S.)

The light cruiser *NAGARA* in late 1920s.



CL NAGARA

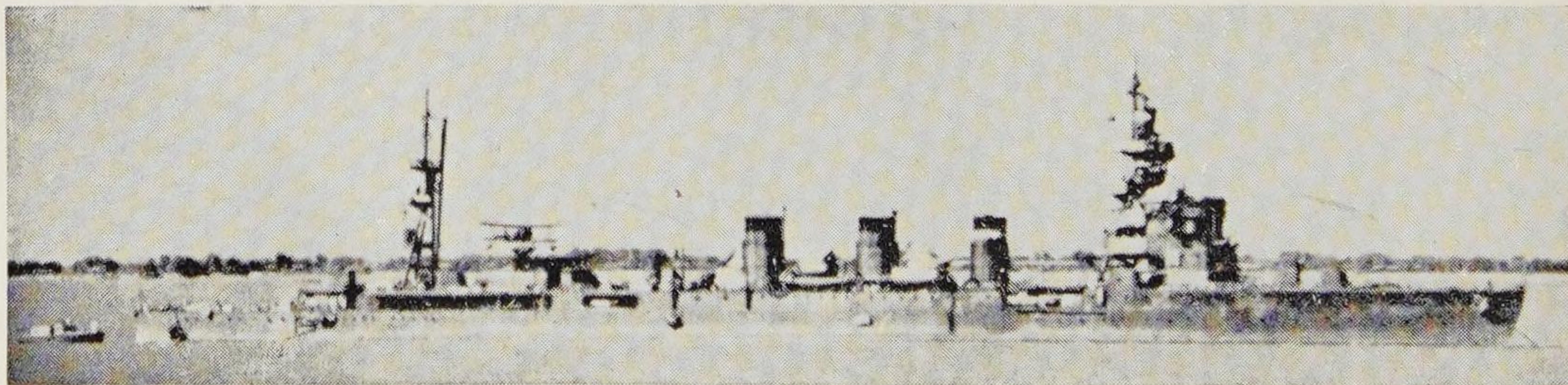
Displacement :	5,170 T. (WS), 5,570 t. (WN)			
Dimensions :	Length :	520.12 ft.-158.53 m. (w.l.)	Beam :	46.49 ft.-14.17 m. (f.l.)
	Draught :	15.75 ft.-4.80 m. (mean)		
Armament :	Guns :	7-5.5 in.	Torpedo Tubes :	8-24 in.
			Planes :	1
			Catapults :	1
Machinery :	Gihon Turbines (Curtis Turbines- <i>KINU</i> only)	S.H.P. :	90,000	Speed :
				36.0 kts.

ABUKUMA

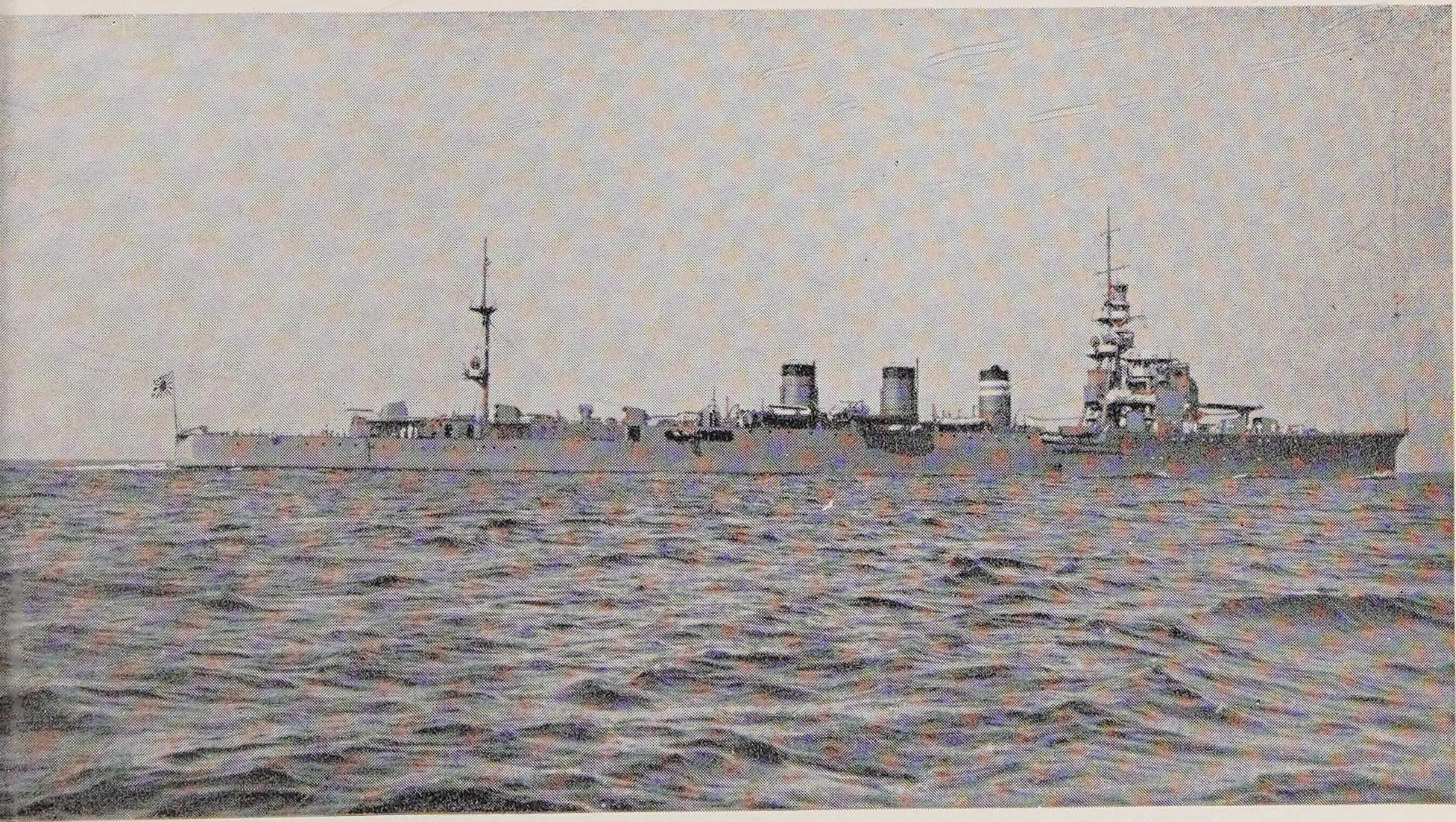
The light cruiser *ABUKUMA* in 1930. The shape of the bow of the *ABUKUMA* was so changed as seen in this photo through repair of the damage received during the grand manoeuvre of 1930. All the other three-stack light cruisers had raked bows.

YURA

The light cruiser *YURA* in 1937. On the catapult is a Type 90 Model 2 floatplane. Note the tripod mainmast which support the derrick.



CL YURA.



CL ABUKUMA

SENDAI Class

Name	Completed	Converted	Fate
SENDAI	29-4-24 Nagasaki	1) 1937 2) 1941	Lost 1-11-43, Battle of Bougainville, U.S. ships
JINTSU	31-7-25 Kawasaki	1) 1934 2) 1941	Lost 13-7-43, Night Battle of Korombangara, U.S. ships
NAKA	30-11-25 Yokohama	1) 1934 2) 1941	Lost 17-2-44, at Truk, U.S. planes

Project: 8-8 Fleet, 1920

History: The last of the 5,500 tons light cruiser series, the *Sendai* Class ships were all four-stackers. In 1934, the tripod mainmast, the derrick and catapult were installed. Prior to the Pacific War, they were again modernised, including equipment of the quadruple torpedo tube mounts.

Comparable Ships: *D* and *C* Classes (Br.), *Omana* (U.S.), *Emden* (Gr.), *Java* (Ned.)

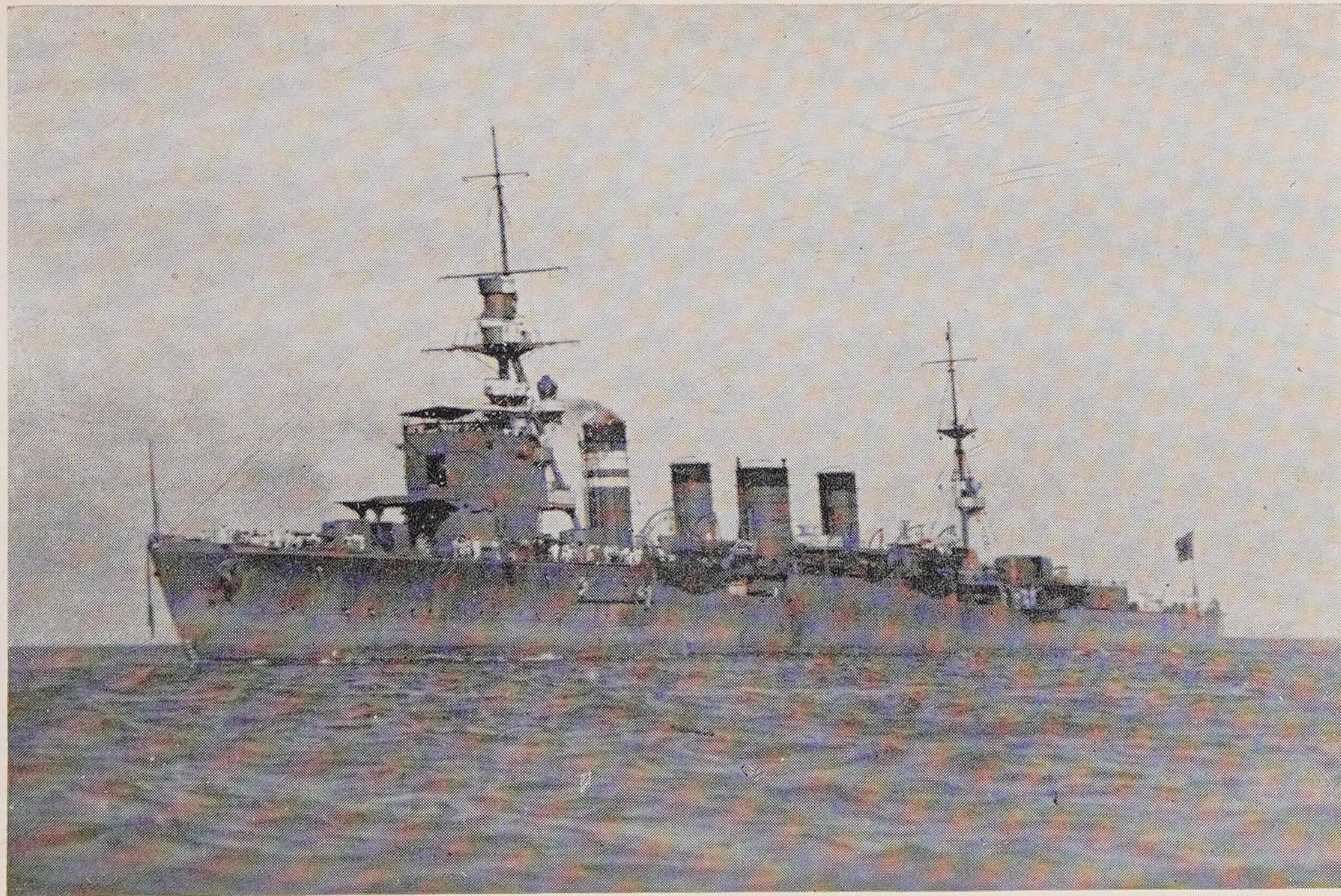
Displacement: 5,195 T. (WS), 5,595 t. (WN)

Dimensions: Length: 520.12 ft.-158.53 m. (W.I.) Beam: 46.49 ft.-14.17 m. (f.l.),
Draught: 16.11 ft.-4.91 m. (mean)

Armament: Guns: 7-5.5 in. Torpedo Tubes: 8-24 in. Planes: 1
Catapults: 1

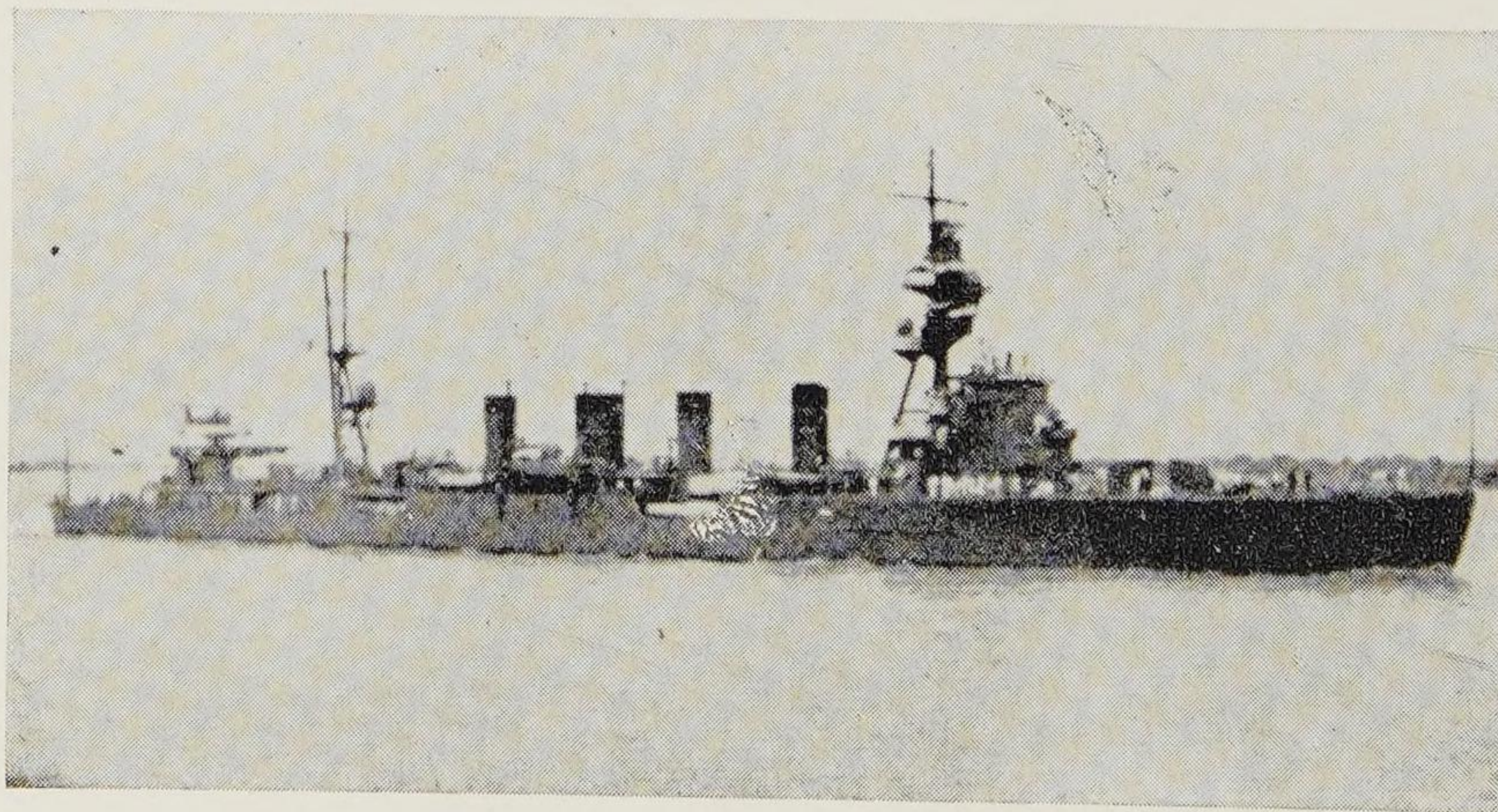
Machinery: Gihon Turbines (Curtis Turbines-*JINTSU* only) S.H.P.: 90,000
Speed: 35.25 kts.

The light cruiser *JINTSU* in 1926. In August 1927 the *JINTSU* collided with the destroyer *WARABI* off Mihogaseki during the high-speed manoeuvres, sinking the destroyer. The bow of *JINTSU* was cut off. The ship was given a bow of different shape later.

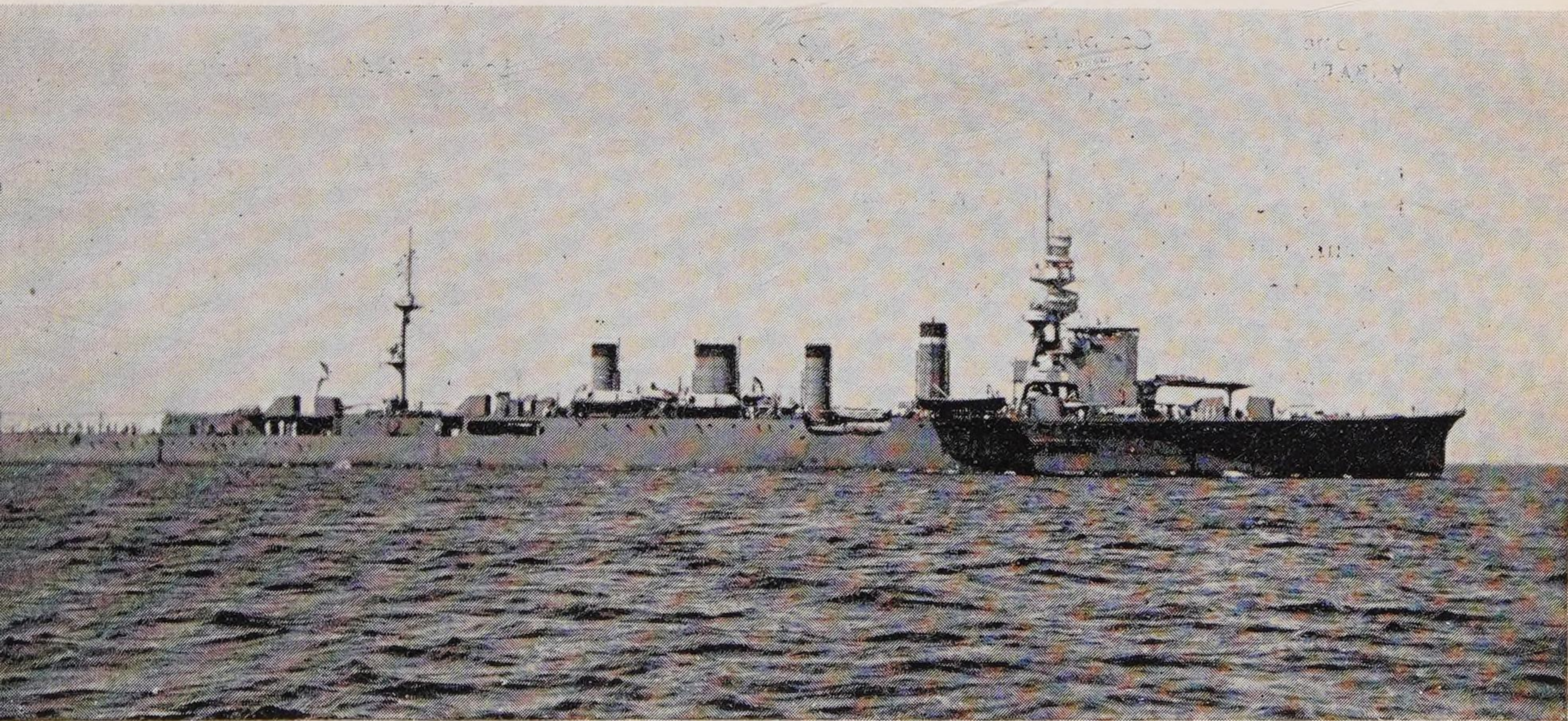


CL JINTSU.

The light cruiser *SENDAI* in August 1937. Note the raked bow of the *SENDAI* which is similar to that of the *Kuma* Class ships. The *SENDAI*'s bow was not changed, while other four-stackers bows were replaced with bows of different shape. The light cruiser *NAKA*, the last to be completed of the *Sendai* Class, had the bow as seen in this picture from the beginning.



CL SENDAI.



CL NAKA.

YUBARI Class

Name	Completed	Converted	Fate
YUBARI	31-7-23 Sasebo	1934	Lost 27-4-44, off Palau U.S. submarine

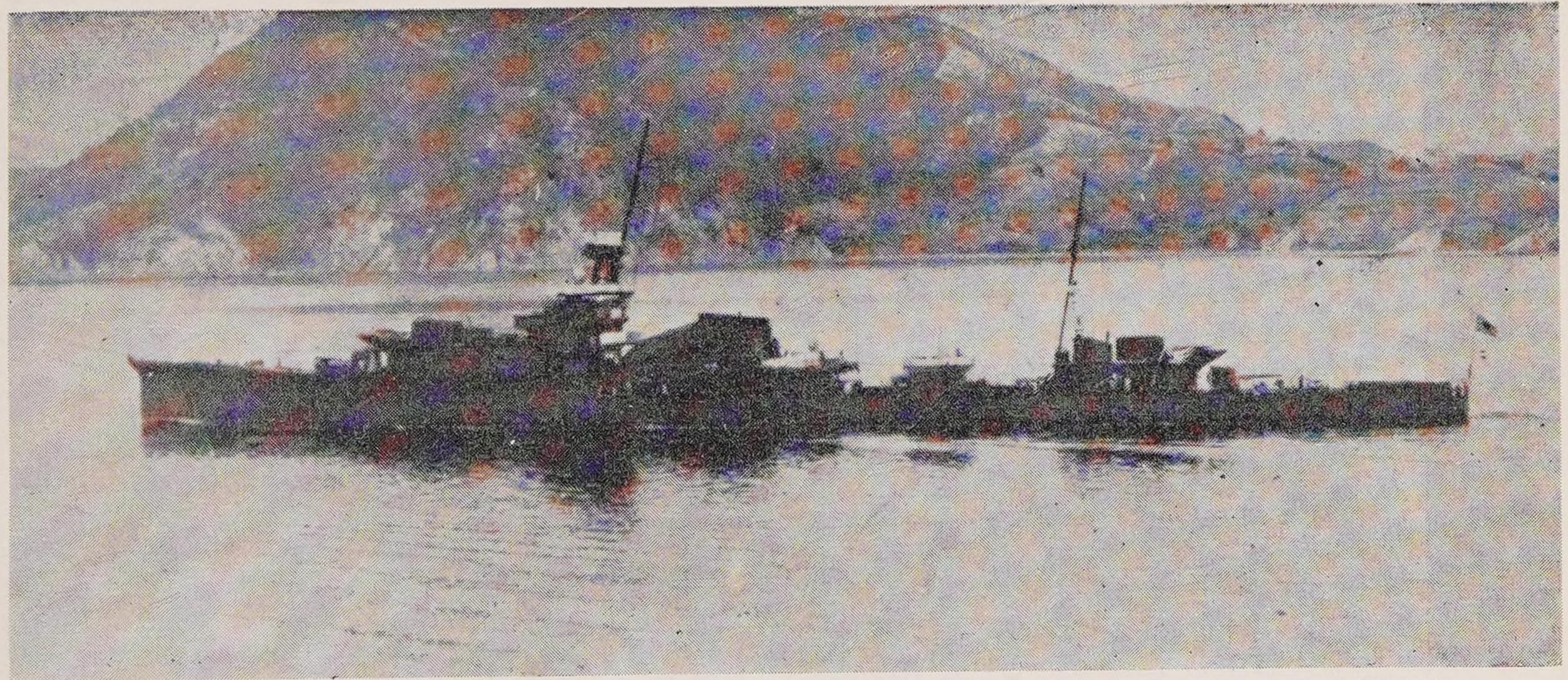
Project: 8-4 Fleet, 1917

History: Designed by Vice Admiral Y.Hiraga, the *YUBARI* is world famous for having armament of the 5,500-ton Class cruiser with its 2,900-ton displacement. All the armament structure was built on the keel-line. The experience in successfully designing the *YU-BARI* contributed greatly to the birth of the *Furutaka* and the subsequent series of heavy cruisers. In 1934, anti-aircraft armament and torpedo tubes were augmented.

Comparable Ships: As destroyer, *Guépard* (Fr.)

Displacement:	2,890 T. (WS), 3,141 t. (WN)		
Dimensions:	Length: 450.02 ft.-137.16 m. (w.l.)		Beam: 39.50 ft.-12.04 m.
	Draught: 11.75 ft.-3.58 m. (mean) (f.l.)		
Armament:	Guns: 6-5.5 in. Torpedo Tubes: 4-24 in.		
Machinery:	Gihon Turblines S.H.P.: 57,900 Speed: 35.5 kts.		

The light cruiser *YUBARI* in 1932 shortly after completion. Later the funnel top was extended.



CL YUBARI.

TRAINING CRUISERS

KATORI Class

Name	Completed	Converted	Fate
KATORI	20-4-40 Yokohama		Lost 17-2-44, at Truk, U.S. ships and planes
KASHIMA	31-5-40 Yokohama	1944	Scrapped after war
KASHII	15-7-41 Yokohama	1944	Lost 12-1-45, in South China Sea, U.S. Planes
KASHIWARA	Construction began in August 1941 but was dismantled due to the outbreak of the Pacific war.		

Project: Third reinforcement programme of 1937-*KATORI* and *KASHIMA*. Fourth reinforcement programme of 1939-*KASHII*. Supplementary programme of 1940-*KASHIWARA*.

History: Named after the old shrines, the *Katori* Class ships were designed and built exclusively for training naval cadets in ocean cruising. The *KATORI* and *KASHIMA* each only could make one ocean cruise because of the war. The *Katori* Class ships were utilized as flagships of the 6th Fleet (*KATORI*), 4th Fleet (*KASHIMA*), and Southern Detachment Fleet (*KASHII*). Later the *KASHIMA* and *KASHII* were converted for anti-submarine roles.

Comparable ships: *Jeanne d'Arc* (Fr.)

Displacement: 5,890 T. (WS), 6,300 t. (WT)

Dimensions: Length: 426.53 ft.-130.00 m. (w.l.)

Beam: 52.33 ft.-15.95 m. (f.l.)

Draught: 18.87 ft.-5.75 m. (mean)

Armament :

Guns: 4-5.5 in., 2-5 in. AA., 4-25 mm. AA.

Torpedo Tubes: 4-21 in.

Machinery :

Planes: 1 Catapults: 1

Turbines and Diesels

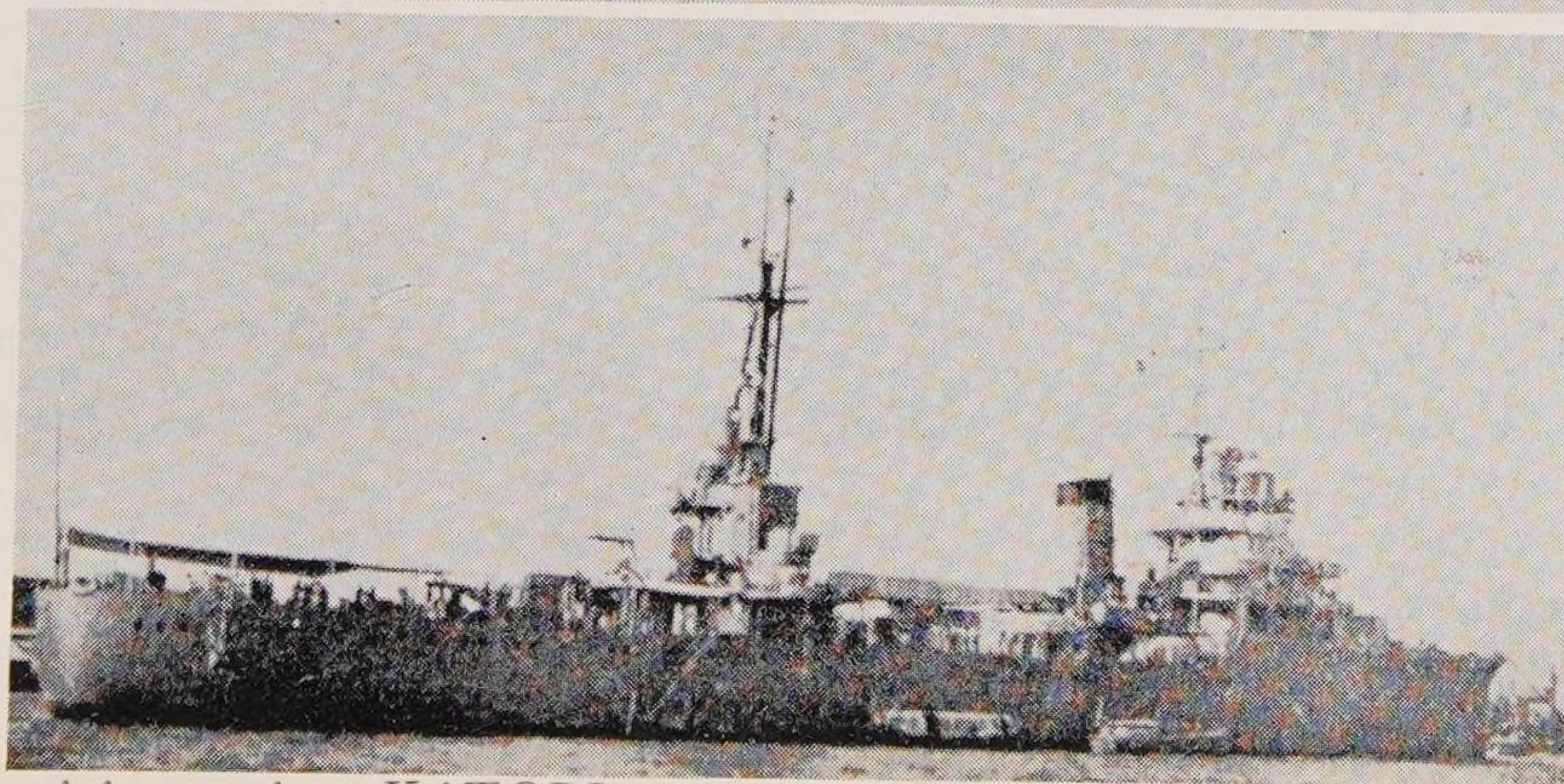
Total H.P.: 8,000

Speed: 18.0 kts.

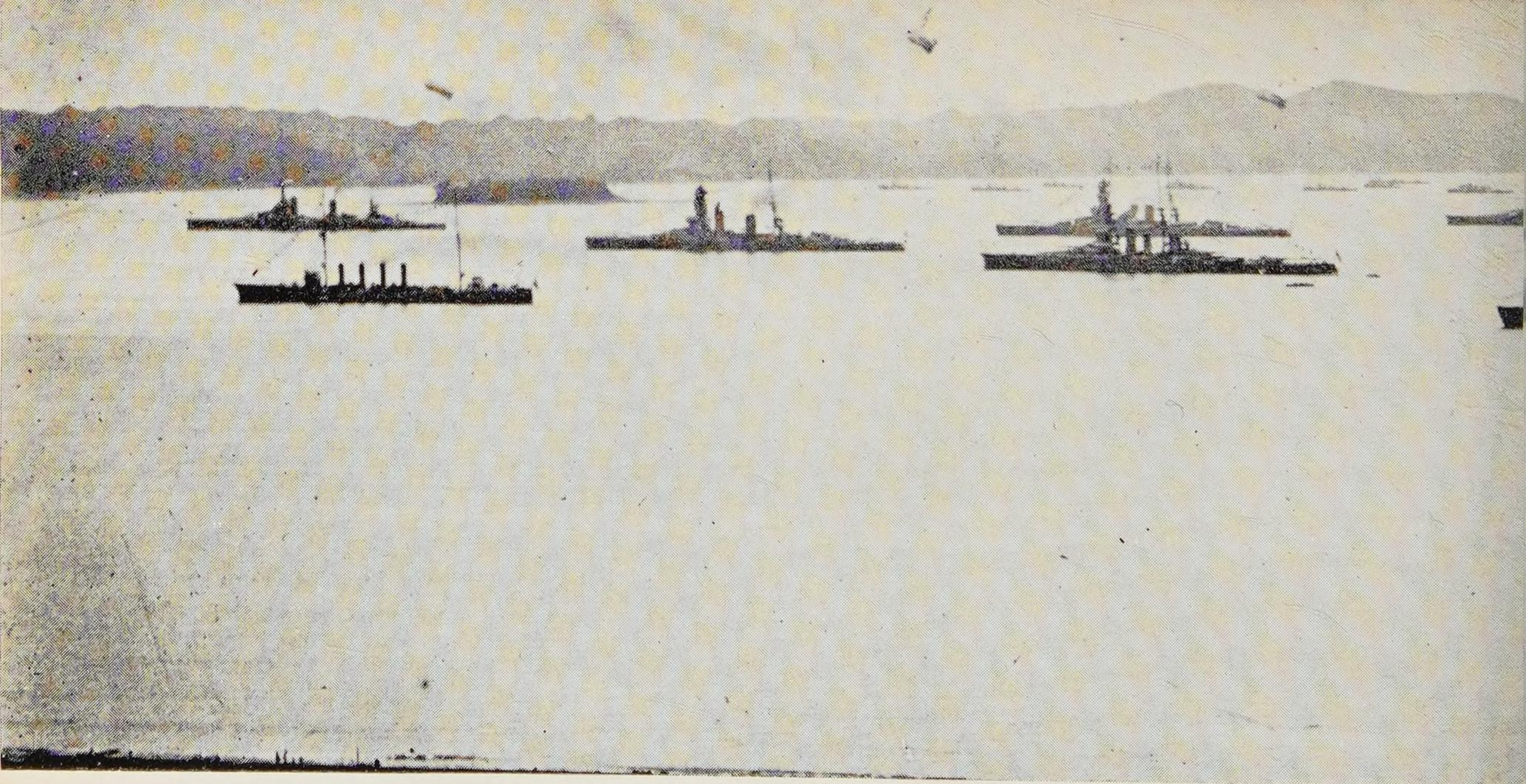
Training CL
KATORI.



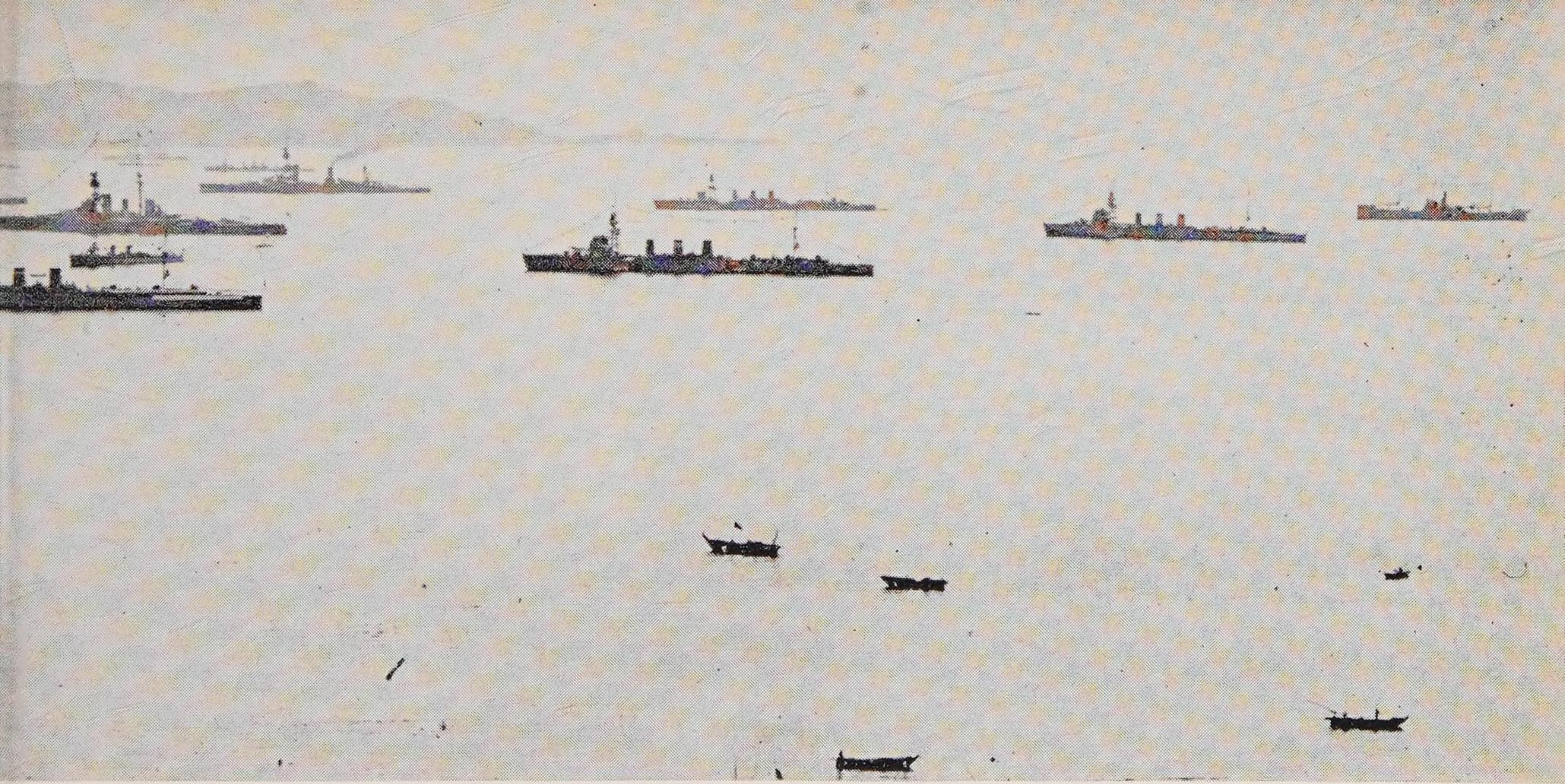
Training CL
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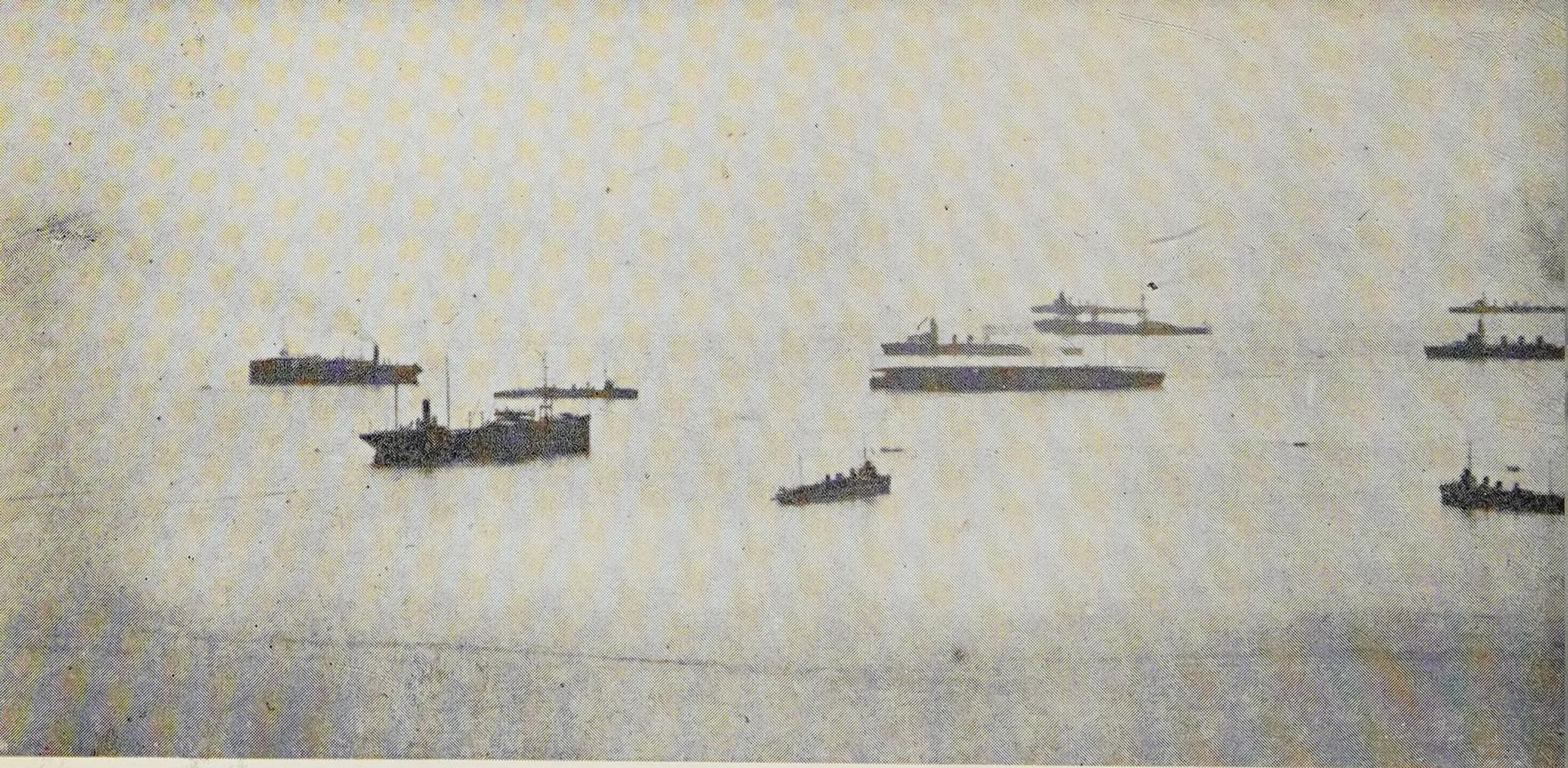


The training cruiser *KATORI* at Canton in September 1940.



Warships of the Combined Fleet dress themselves up at Yokosuka to celebrate the Emperor's Birthday Anniversary in 1924.





Part of the Combined Fleet off Yokosuka in 1927. In the centre is the new carrier AKAGI.

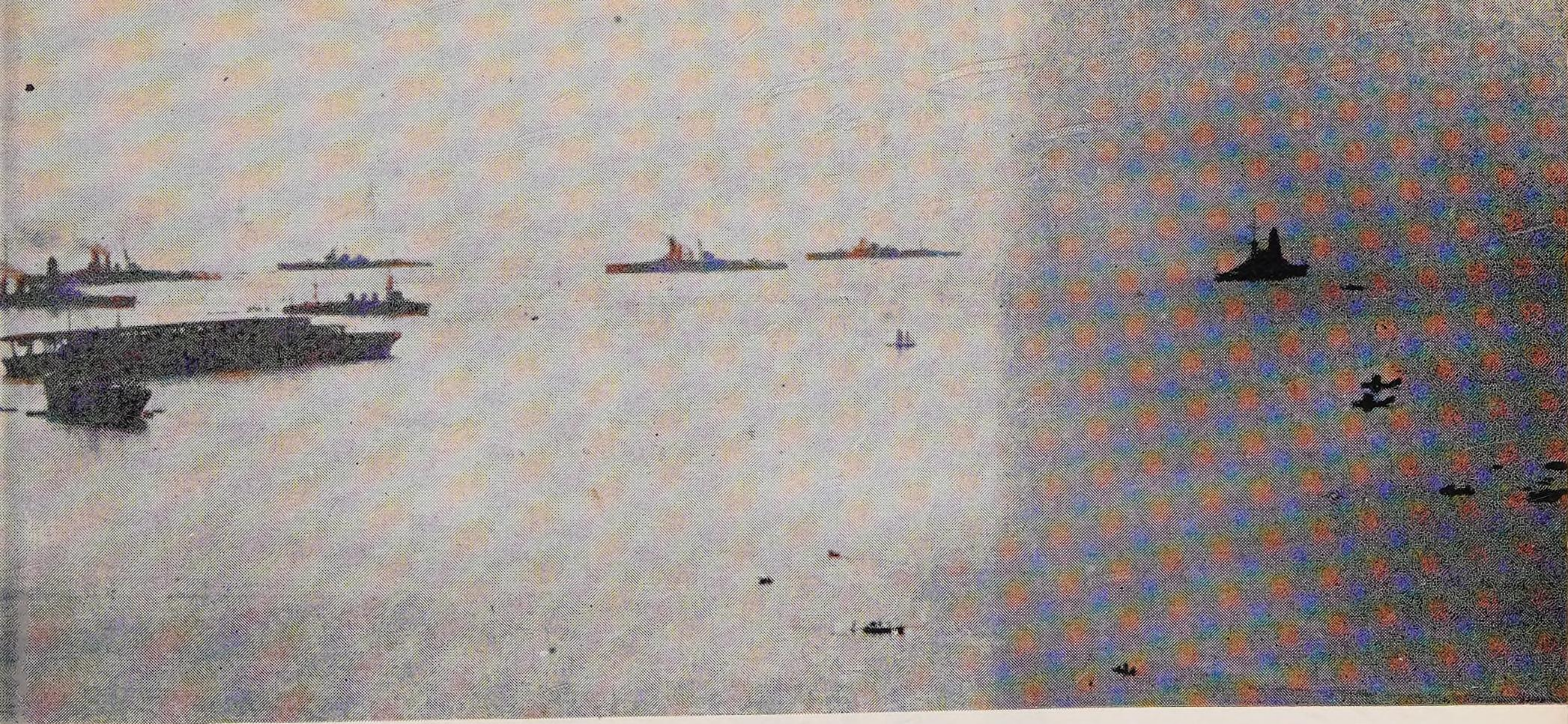


Photo acknowledgements: A number of photographs in this book have been made available through 'Sekai-no-Kansen' (Ships of the World) magazine; Nihon Eiga Shinsha, Messrs. Akira Furukawa, Motoyoshi Hori and Ryoza Handa.

SILHOUETTES

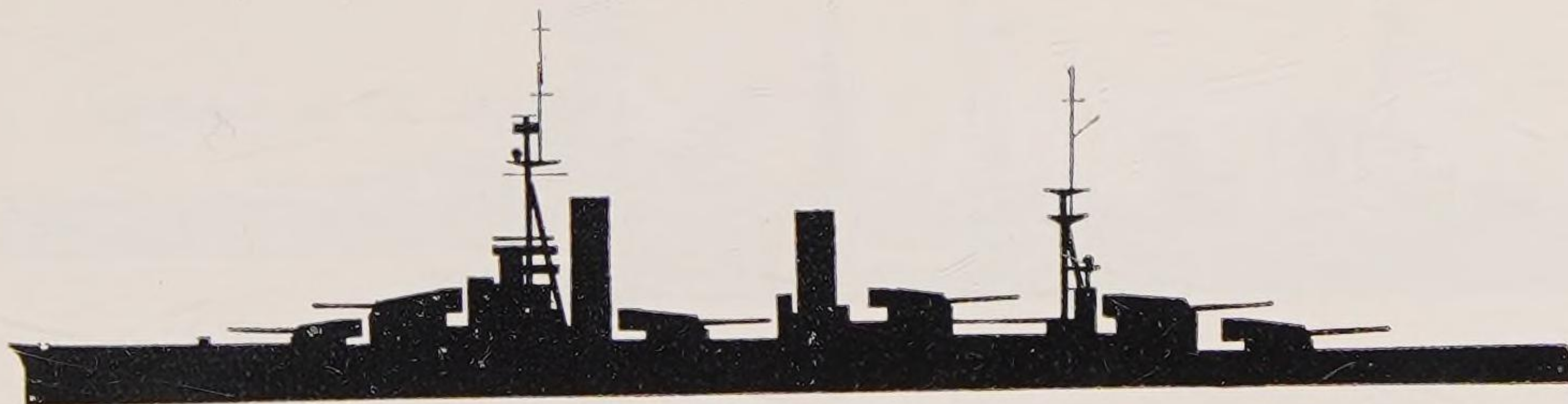
Drawing by *Shoji Yoshida*



Battlecruiser KONGO on completion.



Battleship KONGO after second conversion.



Battleship *FUSO* on completion.



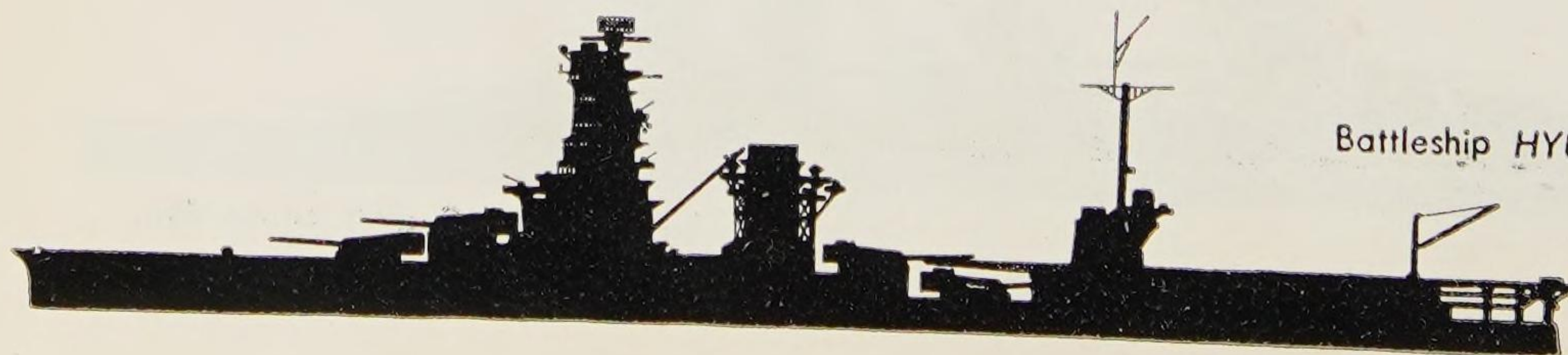
Battleship *FUSO* after conversion.



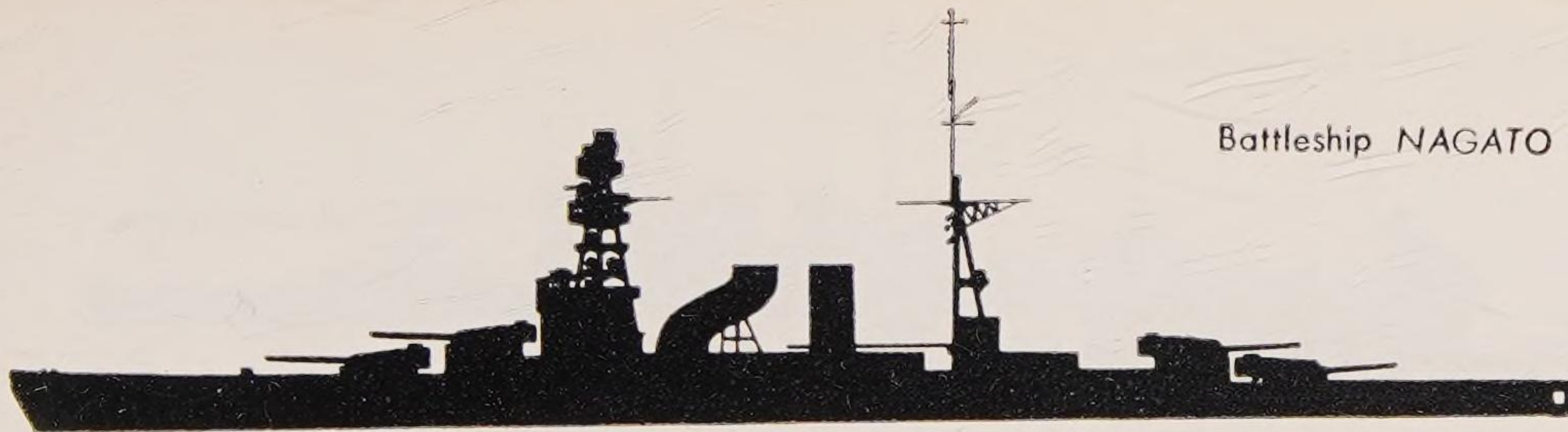
Battleship ISE on completion.



Battleship HYUGA after the second conversion.



Battleship HYUGA as carrier role



Battleship *NAGATO* in late 1920s.



Battleship *NAGATO* after second conversion.



Battleship *YAMATO*



Heavy cruiser MYOKO at completion.



Heavy cruiser MYOKO after first conversion.



Heavy cruiser MYOKO after second conversion.

Heavy cruiser TAKAO at completion.



Heavy cruiser TAKAO after conversion



Heavy cruiser MAYA after conversion in the war.



Heavy cruiser MOGAMI



Heavy cruiser TONE



Light cruiser NAGARA

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